ALPINE

Digital Media Receiver

iDA-X303

MP3 Plays Windows Media™ AAC IMPRINT

HD Radio READY SAT RADIO READY Made for iPod Works with iPhone USB PLAYBACK

- OWNER'S MANUAL
  Please read before using this equipment.

- MODE D'EMPLOI
  Veuillez lire avant d'utiliser cet appareil.

- MANUAL DE OPERACIÓN
  Léalo antes de utilizar este equipo.

EN

FR

ES

iPod
5th generation
(video)
30GB

iPod
5th generation
(video)
60GB 80GB

iPod nano
1st generation
1GB 2GB 4GB

iPod nano
2nd generation
(aluminum)
2GB 4GB 8GB

iPod nano
3rd generation
(video)
4GB 8GB

iPod classic
80GB 160GB

iPod touch
1st generation
8GB 16GB 32GB

iPhone
4GB 8GB 16GB

iPhone 3G
8GB 16GB

Contents

Operating Instructions

SAT Radio Receiver (Optional)

IMPRINT Operation (Optional)

Information

Installation and Connections

LIMITED WARRANTY

Operating Instructions

WARNING

⚠ WARNING

**This symbol means important instructions.
Failure to heed them can result in serious injury
or death.**

DO NOT OPERATE ANY FUNCTION THAT TAKES YOUR ATTENTION AWAY FROM SAFELY DRIVING YOUR VEHICLE.

Any function that requires your prolonged attention should only be performed after coming to a complete stop. Always stop the vehicle in a safe location before performing these functions. Failure to do so may result in an accident.

KEEP THE VOLUME AT A LEVEL WHERE YOU CAN STILL HEAR OUTSIDE NOISES WHILE DRIVING.

Excessive volume levels that obscure sounds such as emergency vehicle sirens or road warning signals (train crossings, etc.) can be dangerous and may result in an accident. LISTENING AT LOUD VOLUME LEVELS IN A CAR MAY ALSO CAUSE HEARING DAMAGE.

MINIMIZE DISPLAY VIEWING WHILE DRIVING.

Viewing the display may distract the driver from looking ahead of the vehicle and cause an accident.

DO NOT DISASSEMBLE OR ALTER.

Doing so may result in an accident, fire or electric shock.

USE ONLY IN CARS WITH A 12 VOLT NEGATIVE GROUND.

(Check with your dealer if you are not sure.) Failure to do so may result in fire, etc.

KEEP SMALL OBJECTS SUCH AS BOLTS OR SCREWS OUT OF THE REACH OF CHILDREN.

Swallowing them may result in serious injury. If swallowed, consult a physician immediately.

USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES.

Failure to do so may result in fire or electric shock.

DO NOT BLOCK VENTS OR RADIATOR PANELS.

Doing so may cause heat to build up inside and may result in fire.

USE THIS PRODUCT FOR MOBILE 12V APPLICATIONS.

Use for other than its designed application may result in fire, electric shock or other injury.

⚠ CAUTION

**This symbol means important instructions.
Failure to heed them can result in injury or
material property damage.**

HALT USE IMMEDIATELY IF A PROBLEM APPEARS.

Failure to do so may cause personal injury or damage to the product. Return it to your authorized Alpine dealer or the nearest Alpine Service Center for repairing.

⚠ PRECAUTIONS

Product Cleaning

Use a soft dry cloth for periodic cleaning of the product. For more severe stains, please dampen the cloth with water only. Anything else has the chance of dissolving the paint or damaging the plastic.

Temperature

Be sure the temperature inside the vehicle is between +60°C (+140°F) and –10°C (+14°F) before turning your unit on.

Maintenance

If you have problems, do not attempt to repair the unit yourself. Return it to your Alpine dealer or the nearest Alpine Service Station for servicing.

Installation Location

Make sure this unit will not be installed in a location subjected to:

• Direct sun and heat
• High humidity and water
• Excessive dust
• Excessive vibrations

Protecting the USB connector

• Only USB flash memory devices, iPhones/iPods or Portable audio players can be connected to the USB connector on this unit. Correct performance using other USB products cannot be guaranteed. A USB hub is not supported.
• If the USB connector is used, be sure to connect it to the unit by using a USB extension cable (supplied). A USB hub is not supported.
• Depending on the type of memory connected, it may not be functional or not all of its functions are supported.
• The audio file format that can be played back on the unit is MP3/WMA/AAC.
• Artist/song name, etc., can be displayed, however characters may not be correctly displayed.

⚠ CAUTION

Alpine accepts no responsibility for lost data, etc., even if data, etc., is lost while using this product.

On Handling USB Memory

- To prevent malfunction or damage, note the following points.
    Read the USB memory Owner's Manual thoroughly.
    Do not touch the terminals by hand or metal.
    Do not subject USB memory to excessive shock.
    Do not bend, drop, disassemble, modify or soak in the water.
- Avoid usage or storage in the following locations:
    Anywhere in the car exposed to direct sunlight or high temperatures.
    Anywhere the possibility of high humidity or corrosive substances are present.
- Fix the USB memory in a location where driver operation will not be hindered.
- USB memory may not function correctly at high or low temperature.
- Use only certified USB memory. Note that even certified USB memory, may not function correctly depending on its type or state.
- USB memory function is not guaranteed. Use USB memory according to the terms of agreement.
- Depending on the settings of the USB memory type, memory state or encoding software, the unit may not play back or display properly.
- Files that are copy-protected (using some type of DRM, Digital Rights Management) cannot be played back on this unit. WMA format files with DRM or AAC format files that have been purchased from the iTunes Store are included in this restriction.
- USB memory may take time to start playback. If there is a particular file other than audio in the USB memory, it may take considerable time before the file is played back or searched.
- The unit can play back "mp3", "wma" or "m4a" file extensions.
- Do not add the above extensions to a file other than audio data. This non-audio data will not be recognized. The resulting playback may contain noise that can damage speakers and/or amplifiers.
- It is recommended to back up important data on a personal computer.
- Do not remove the USB device while playback is in progress. Change SOURCE to something other than USB, then remove the USB device to prevent possible damage to its memory.

On Handling Portable audio player

- The unit can control a Portable audio player with the USB interface. Playable audio file formats are MP3 and WMA.
- Portable audio player function is not guaranteed. Use Portable audio player according to the terms of agreement. Read the Portable audio player Owner's Manual thoroughly.
- Avoid usage or storage in the following locations:
    Anywhere in the car exposed to direct sunlight or high temperatures.
    Anywhere the possibility of high humidity or corrosive substances are present.
- Fix the Portable audio player in a location where driver operation will not be hindered.
- Portable audio player may not function correctly at high or low temperature.
- Depending on the settings of the Portable audio player type, memory state or encoding software, the unit may not play back or display properly.

- If the Portable audio player has an MSC/MTP setting, set to MTP.
- A Portable audio player in which data is stored by USB Mass Storage may not be playable on the unit.
- Depending on the Portable audio player settings, USB Mass Storage may be supported. For setting, refer to the Owner's Manual of the player.
- The unit can play back MP3/WMA files synchronized by Windows Media Player (Ver. 7.1, 8, 9, 9.1, 9.2), and are then forwarded to the player. The "mp3" or "wma" extensions are playable.
- If data is not synchronized by Windows Media Player and is forwarded in another way, the unit may not be able to correctly play back the files.
- WMDRM10 is supported by the unit.
- A file that is copy-protected (copyright protection) cannot be played back.
- It is recommended to back up important data on a personal computer.
- Do not remove the USB device while playback is in progress. Change SOURCE to something other than USB, then remove the USB device to prevent possible damage to its memory.

- *Windows Media and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.*
- *iPod and iTunes are trademarks of Apple Inc., registered in the U.S. and other countries.*
- *iPhone is a trademark of Apple Inc.*
- *"Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.*
- *"Works with iPhone" means that an electronic accessory has been designed to connect specifically to iPhone and has been certified by the developer to meet Apple performance standards.*
- *Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.*
- *The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Alpine Electronics, Inc. is under license. Other trademarks and trade names are those of their respective owners.*
- *HD Radio™ and the HD and the HD Radio Ready logos are proprietary trademarks of iBiquity Digital Corp.*
- *"MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson."*
- ***"Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generation) real time broadcasting (terrestrial, satellite, cable and/or any other media), broadcasting/streaming via internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit http://www.mp3licensing.com"***
- *Audyssey MultEQ XT is a registered trademark of Audyssey laboratories Inc.*

Double Action Encoder Operation

Double Action encoder
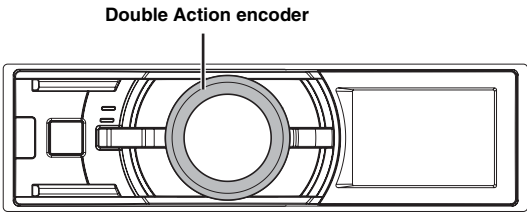
There are 2 ways to operate the Double Action encoder.

Normal operation

Turn the Double Action encoder to the left or right.
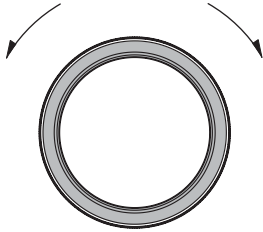
To adjust volume and scroll through a list of items.

Alternate operation

Turn the Double Action encoder to the left or right.
When you release the Double Action encoder, the display changes.

Double Action encoder

Push
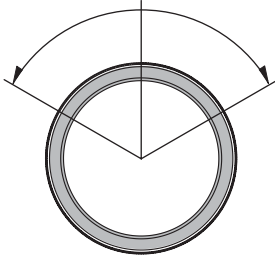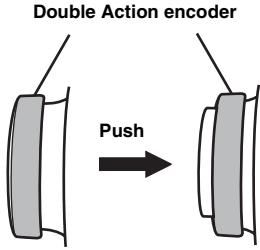
Depending on the situation, you can change an item or display. If you press and turn the Double Action encoder to the left or right, you can change items/displays continuously.

Getting Started

Double Action encoder

FUNCTION/SETUP

⏏

⏻ SOURCE   ↩   🔍/ENTER   VIEW
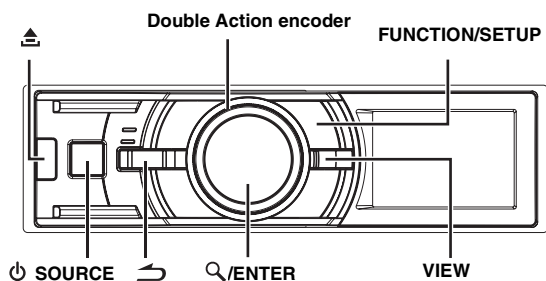
Accessory List

- **Digital Media receiver** 1
- **Power cable** 1
- **USB cable** 1
- **Interface cable for iPod** 1
- **Mounting sleeve** 1
- **Carrying case** 1
- **Bracket key** 2
- **Screw (M5x8)** 4
- **Owner's Manual** .... 1 set

Turning Power On and Off

Press ⏻ SOURCE to turn on the unit.

- *The unit can be turned on by pressing any other button except ⏏ (Release), Double Action encoder and VIEW. The unit is also automatically turned on if a USB memory/iPhone/iPod is connected.*

Press and hold ⏻ SOURCE for at least 2 seconds to turn off the unit.

- *The first time power is turned on, the volume will start from level 12.*

Detaching and Attaching the Front Panel

Detaching

1 **Turn off the unit power.**

2 **Press ⏏ (Release) at the middle left side until the front panel pops out.**

3 **Grasp the left side of the front panel and pull it out.**
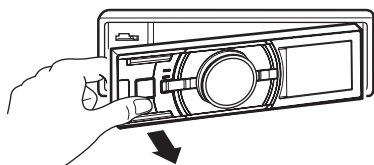
- *The front panel may become hot in normal usage (especially the connector terminals on the back of the front panel). This is not a malfunction.*
- *To protect the front panel, place it in the supplied carrying case.*

Attaching

1 **Insert the right side of the front panel into the main unit. Align the groove on the front panel with the projections on the main unit.**

2 **Push the left side of the front panel until it locks firmly into the main unit.**
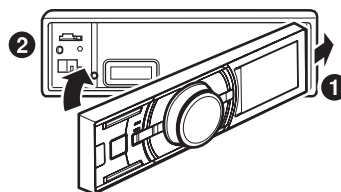
- *Before attaching the front panel, make sure that there is no dirt or dust on the connector terminals and no foreign object between the front panel and the main unit.*
- *Attach the front panel carefully. Hold the panel by its sides to avoid pushing any buttons by mistake.*

Initial System Start-Up

Be sure to press the RESET switch when using the unit for the first time, after changing the car battery, etc.

1 **Turn off the unit power.**

2 **Press ⏏ (Release) to remove the front panel.**

3 **Press RESET with a ballpoint pen or similar pointed object.**

Adjusting Volume

Turn the Double Action encoder until the desired sound is obtained.

Setting the Calendar

1. **Press and hold FUNCTION/SETUP for at least 2 seconds to activate the SETUP selection mode.**

2. **Turn the Double Action encoder to select the GENERAL mode, and then press ⊙/ENTER.**

   BT*¹ ↔ AUDIO*² ↔ GENERAL ↔ DISPLAY ↔ IPOD ↔ TUNER*³ ↔ BT

   *¹ *Displayed only when INT MUTE is set to OFF, and the mode is set to other than BT AUDIO.*
   *² *Displayed only when an external audio processor is connected. For details, refer to the Owner's Manual of the external audio processor.*
   *³ *Only when HD Radio / SAT Radio receiver is connected.*

3. **Turn the Double Action encoder to select CALENDAR ADJ, and then press ⊙/ENTER.**

4. **Turn the Double Action encoder to set year.**

5. **Press ⊙/ENTER.**

6. **Repeat steps 4 and 5 above to set month, day.**

7. **Press and hold ⊲ for at least 2 seconds to return to normal mode.**

- *Pressing ⊲ during the procedure will return to the previous mode.*
- *If no operation is performed for 60 seconds, the unit will return to normal mode automatically.*

Setting the Time

1. **Press and hold FUNCTION/SETUP for at least 2 seconds to activate the SETUP selection mode.**

2. **Turn the Double Action encoder to select the GENERAL mode, and then press ⊙/ENTER.**

   BT*¹ ↔ AUDIO*² ↔ GENERAL ↔ DISPLAY ↔ IPOD ↔ TUNER*³ ↔ BT

   *¹ *Displayed only when INT MUTE is set to OFF, and the mode is set to other than BT AUDIO.*
   *² *Displayed only when an external audio processor is connected. For details, refer to the Owner's Manual of the external audio processor.*
   *³ *Only when HD Radio / SAT Radio receiver is connected.*

3. **Turn the Double Action encoder to select CLK ADJ, and then press ⊙/ENTER.**

4. **Turn the Double Action encoder to set hour.**

5. **Press ⊙/ENTER.**

6. **Repeat steps 4 and 5 above to set minutes.**

7. **Press and hold ⊲ for at least 2 seconds to return to normal mode.**

- *Pressing ⊲ during the procedure will return to the previous mode.*
- *If no operation is performed for 60 seconds, the unit will return to normal mode automatically.*

Displaying the Calendar/Time

Press VIEW.
The calendar/time is displayed. Pressing VIEW again will return to normal mode.

```
09/ 01 /01
      12:00
```
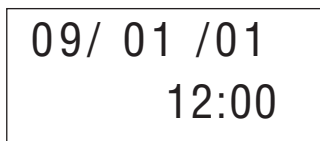
- *If an HD Radio Tuner is connected, text information can be displayed. Refer to "Changing the Display (HD Radio mode only)" (page 9).*
- *If an XM receiver is connected, the Auxiliary Data Field can be displayed. Refer to "Setting the Auxiliary Data Field Display (XM only)" (page 28).*

Controllable With Remote Control
Point the optional remote control transmitter at the remote control sensor.
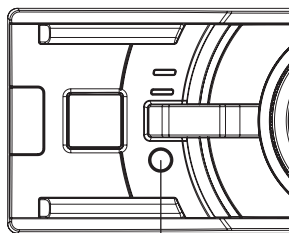
Remote control sensor

Connectable to Steering Remote Control Interface Box
You can operate this unit from the vehicle's control unit when an Alpine Steering Remote Control Interface Box (optional) is connected. For details, contact your Alpine dealer.

Radio

Double Action encoder

|◄◄ ►►| ↰

FUNCTION/SETUP

BAND   TUNE/A.ME ℚ /ENTER   PRESET VIEW

⏻ SOURCE
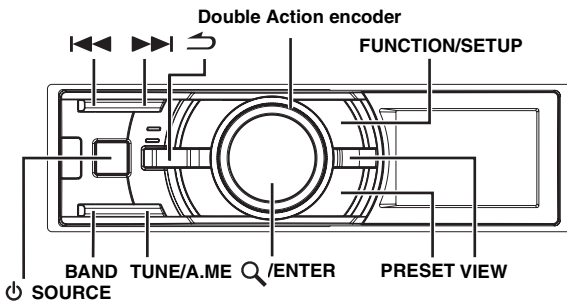
This unit cannot receive HD Radio signals (digital terrestrial radio). In order to activate the digital radio functions described below, an optional HD Radio Tuner module must be connected through the Ai-NET bus.

iTunes Tagging lets you tag songs you hear on HD Radio stations with your new iDA-X303 and then preview, buy, and download them later from your iTunes Tagged playlist the next time you sync your iPod. If the unit is connected to a Tagging compatible device, you can use the iTunes Tagging function. For details, refer to the Owner's Manual of the Tagging compatible device.

Listening to Radio

HD Radio signals can be received if the HD Radio TUNER MODULE (TUA-T500HD) is connected. While receiving HD Radio signals, the unit can automatically switch between the analog and digital signal.

1   Press ⏻ SOURCE to select TUNER mode.

2   Press BAND repeatedly until the desired radio band is displayed.

  FM1 → FM2 → AM → FM1

3   Press TUNE/A.ME to select the tuning mode.

  DX SEEK (Distance mode) → SEEK (Local mode) → (Blank) (Manual mode) → DX SEEK (Distance mode)

• *The initial mode is Distance mode.*

Distance mode:
  Both strong and weak stations will be automatically tuned in (Automatic Seek Tuning).

Local mode:
  Only strong stations will be automatically tuned in (Automatic Seek Tuning).

Manual mode:
  The frequency is manually tuned in steps (Manual tuning).

4   Press |◄◄ or ►►| to tune in the desired station.
  Holding down |◄◄ or ►►| will change the frequency continuously.

• *When DIGITAL SEEK is ON, SEEK UP/DOWN only stops on digital broadcasts with the HD Radio connected. Refer to "Digital Seek On/ Off Setting" (page 23).*

Presetting Stations Manually

1   Select the radio band and tune in a desired radio station you wish to store in the preset memory.

2   Press PRESET.
  The Preset screen is displayed.

3   Turn the Double Action encoder to select the preset number.

4   Press and hold ℚ /ENTER for at least 2 seconds.
  The selected station is stored.
  The display shows the band, preset number and station frequency memorized.

• *A total of 18 stations can be stored in the preset memory (6 stations for each band; FM1, FM2 and AM).*
• *If you store a station in a preset memory which already has a station, the current station will be cleared and replaced with the new station.*

Presetting Stations Automatically

1   Press BAND repeatedly until the desired radio band is displayed.

2   Press and hold TUNE/A.ME for at least 2 seconds.
  The tuner will automatically seek and store 6 strong stations in the selected band. They will be stored 1 to 6 in order of signal strength.
  When the automatic memory has been completed, the tuner goes to the station stored in preset location No.1.

• *If no stations are stored, the tuner will return to the original station you were listening to before the auto memory procedure began.*

Tuning to Preset Stations

1   Press BAND repeatedly until the desired band is displayed.

2   Press PRESET.
  The Preset screen is displayed.

3   Turn the Double Action encoder to select a radio station.

4   Press ℚ /ENTER.
  The display shows the band, preset number and frequency of the station selected.

Frequency Search Function

You can search for a radio station by its frequency.

1 **Press ⃝/ENTER in Radio mode to activate Frequency search mode.**

2 **Turn the Double Action encoder to select the desired frequency.**

3* **Press ⃝/ENTER to receive the selected frequency.**

* *Operation is not required during HD Radio reception.*

• *Press ⤹ in the search mode to cancel. Or, the search mode will be canceled if no operation is performed for 10 seconds.*

Receiving a Multicast Station (HD Radio™ Reception) (HD Radio mode only)

Multicasting which is the Ability to broadcast multiple program streams over a single FM frequency thereby increasing the amount and diversity of content choices. A maximum of eight multicast station channels can be selected on this unit.

1 **When multicast station is received, the program number is displayed, and ⃞ indicator lights up.**

```
                           ┌── Program No.
        F M 1 - 2
                 8 8 . 7
```
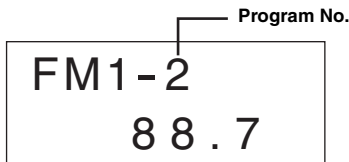
2 **Press FUNCTION/SETUP to display the Program Type screen.**

3 **Turn the Double Action encoder to select a program, and press ⃝/ENTER.**
The selected program is received.

```
                           ┌── Program No.
        F M 1 - 3
                 8 8 . 7
```
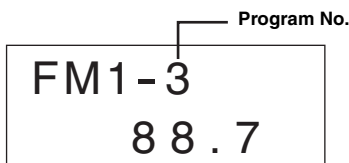
Program Service example:

Multicast Radio Station	Program No.	Program Service
88.7	1	MPS: Main Program Service
88.7	2	SPS: Sub-program Service
88.7	3	SPS: Sub-program Service
	.	
	.	
	.	
88.7	8	SPS: Sub-program Service

Changing the Display (HD Radio mode only)

Press VIEW.
Every time VIEW is pressed changes the display.

```
┌──────────┐   ┌─────────────────────┐   ┌──────────┐
│Band No.  │ → │Station              │ → │Song title│
│Frequency │   │Station Call Letter* │   │Artist    │
└──────────┘   └─────────────────────┘   │title     │
                                          └──────────┘

   ┌──────────┐   ┌──────────┐   ┌──────────┐
 → │Song title│ → │Calendar  │ → │Band No.  │
   │Album title│   │Clock     │   │Frequency │
   └──────────┘   └──────────┘   └──────────┘
```
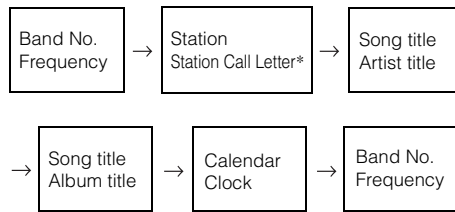
* *You can set a long or short HD Radio station name. Refer to "HD Radio Station Call Setting" (page 23).*

iPhone/iPod (Optional)

Double Action encoder

I◀◀ ▶▶I   ⤴   FUNCTION/SETUP

◀◀ ▶/II   Q /ENTER   VIEW

⏻ SOURCE
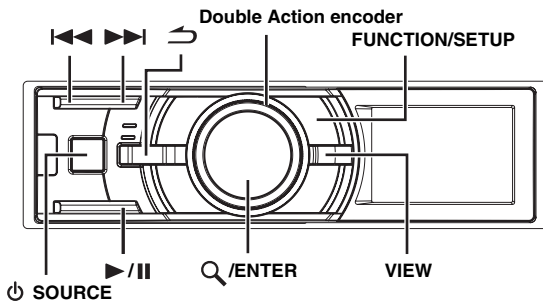
An iPhone/iPod can be connected to this unit by using the Interface cable for iPod (supplied). When this unit is connected by using the cable, the controls on the iPod are not functional.

- *Internet and telephone functions of iTouch or iPhone, ect., can also be used when connecting to the unit. However, using these functions will stop or pause the playing songs, at this time do not operate the unit to avoid a malfunction.*
- *If you connect an iPhone to this unit, it can be used as an iPod. If you use iPhone as a hands-free phone, you need the optional Bluetooth INTERFACE (KCE-400BT).*

About iPhones/iPods usable with this unit

- The unit can be used with the fifth generation and above iPod, iPhone 3G, iPhone, iPod touch, iPod classic, the first generation iPod nano, the second generation iPod nano or the third generation iPod nano only. iPod Shuffle cannot be used, however.
- Touch wheel or scroll wheel type iPods without the dock connector cannot be connected to the unit.
- The unit can be used with the following iPhones/iPods.

  iPhone 3G (version 2.0)
  iPhone (version 1.1.4)
  iPod touch (version 1.0.4)
  iPod classic (version 1.1.1)
  iPod nano (3rd generation) (version 1.1)
  iPod nano (2nd generation) (version 1.1.3)
  iPod with video (version 1.2.3)
  iPod nano (1st generation) (version 1.3.1)

- For clarity in identifying your model of iPod, please see Apple's own document "Identifying iPod models" at http://support.apple.com/kb/HT1353
- This unit does not support iPhone/iPod's video playback function, even using a video-compatible cable.
- If the unit is used with versions of iTunes earlier than 7.6, correct function and performance are not guaranteed.

Playback

1   Press ⏻ **SOURCE** to switch to the USB IPOD mode.

2   Press I◀◀ or ▶▶I to select the desired song.

Return to the beginning of the current song:
Press I◀◀ .

Fast backward through current song:
Press and hold I◀◀ .

Advance to the beginning of the next song:
Press ▶▶I .

Fast forward through current song:
Press and hold ▶▶I .

3   To pause playback, press ▶/II .
Pressing ▶/II again will resume playback.

- *If a song is playing on the iPhone/iPod when it is connected to this unit, it will continue playing after the connection.*
- *An episode or audiobook may have several chapters, the chapter can be changed by pressing I◀◀ or ▶▶I .*

Searching for a desired Song/Title

An iPhone/iPod can contain hundreds of songs. By keeping these songs organized in playlists, this unit can use these to ease song searches.

Using the Playlist/Artist/Album/Podcast/Audiobook/Genre/Composer/Song search mode's individual hierarchy, you can narrow down your search as shown in the table below.

Hierarchy 1	Hierarchy 2	Hierarchy 3	Hierarchy 4
PLAYLISTS	SONG	—	—
ARTISTS*	ALBUM*	SONG	—
ALBUMS*	SONG	—	—
PODCASTS	EPISODE	—	—
AUDIOBOOKS	—	—	—
GENRES*	ARTIST*	ALBUM*	SONG
COMPOSERS*	ALBUM*	SONG	—
SONGS	—	—	—

- *You can select your preferred search mode. Refer to "iPod Search Mode Setting" (page 23).*

For example: Searching by Artist name
The following example explains how an ARTISTS search is performed. Another search mode can be used for the same operation, although the hierarchy differs.

1   Press Q /**ENTER** to activate the Menu Select mode.

2   Turn the **Double Action encoder** to select the ARTISTS, and then press Q /**ENTER**.
The artist search mode is activated and artists names are displayed.

3   Turn the **Double Action encoder** to select the desired Artist, and then press Q /**ENTER**.
The album search mode is activated and albums names are displayed.

4 **Turn the Double Action encoder to select an album, and then press ⊕/ENTER.**

The song search mode is activated and songs names are displayed.

5 **Turn the Double Action encoder to select a song and press ⊕/ENTER.**

The selected song is played back.

- *While in the search mode, if you press and hold ⏎ for at least 2 seconds the search mode is canceled.*
- *In the search mode, pressing ⏎ will return to the previous mode.*
- *When search is made during M.I.X. play, the M.I.X. play mode will be canceled.*
- *"NO SONG" will be displayed if there are no songs in the selected playlist in the PLAYLISTS search mode.*
- *"NO PODCAST" will be displayed if there is no podcast data in the iPhone/iPod in the PODCASTS search mode.*
- *"NO A-BOOK" will be displayed if there is no audiobook data in the iPhone/iPod in AUDIOBOOKS search mode.*
- *If the iPod's name is selected in the Playlist Search mode and ⊕/ENTER is pressed, all songs in the iPhone/iPod are searchable. If you press and hold ⊕/ENTER for at least 2 seconds, all songs in the iPhone/iPod are played back beginning from the first song listed.*
- *The display "NO SUPPORT" is scrolled if text information is not compatible with this unit.*
- *After selecting [ALL] in the search mode with "*", press and hold ⊕/ENTER for at least 2 seconds to play back all songs in the iPhone/iPod or selected search mode.*
- *If percent skip function is activated in the search mode, a search can be made quickly by skipping to the specified location. For details, refer to "Percent Skip Function" on page 11.*
- *If Alphabet Skip Function is activated in the search mode, a search can be made quickly by Alphabet skip function to find the desired artist or song, etc. For details, refer to "Alphabet Skip Function" on page 11.*
- *In the search mode, you can scroll the page by pressing and turning the Double Action encoder.*
- *If no operation is performed for 60 seconds, the unit will return to normal mode automatically.*

Percent Skip Function

The unit is provided with a percent skip function for effective searching. When you use this function in the search mode, you can quickly search an artist or a song, etc.

If there are 100 songs in your iPhone/iPod, they are divided into 10 groups using percentages (shown below).

Number of song / %	All 100 songs							
	10th song	20th song	...	50th song	...	80th song	...	100th song
10 %	■							
20 %	■	■						
⋮								
50 %	■	■	■	■				
⋮								
80 %	■	■	■	■	■	■		
⋮								
100 %	■	■	■	■	■	■	■	■

*   *You can select to show a percentage of the total stored songs, in 10% steps.*

1 **Press FUNCTION/SETUP repeatedly to choose the percent skip mode.**

Alphabet skip function → Percent skip function → Normal search mode → Alphabet skip function

2 **Press and turn the Double Action encoder.**
Each turn of the Double Action encoder to the right will jump 10%, 20% and 100% in ascending order.
Each turn of the Double Action encoder to the left will jump 100%, 90% and 10% in descending order.

Scroll bar display example (if 50% is shown)

scroll bar
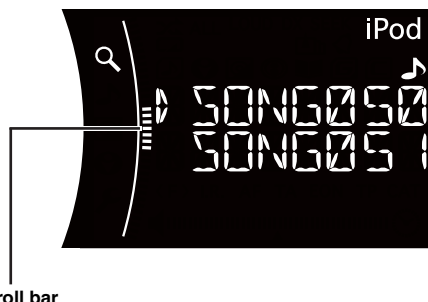
Alphabet Skip Function

The initial skip function is skipped to the next number, symbol or letter such as from A to B, B to C.
You can skip in reverse order such as B to A by turning the Double Action encoder to the left.

1 **In the search mode, press FUNCTION/SETUP repeatedly to choose the alphabet skip mode.**
Alphabet skip function → Percent skip function → Normal search mode → Alphabet skip function

2 **Press and turn the Double Action encoder.**
A list is skipped to the next page or next number, symbol or letter.

- *If the Double Action encoder is pressed and turned to the left or right, the display continuously changes.*
- *The Alphabet Skip Function in the song search mode is available only when a song search is selected on the Menu select screen.*
- *Titles are listed alphabetically, and can be skipped every 200 titles. If there are fewer than 200 titles, titles beginning with the next alphabetical character are selected.*

Up/Down Function

If you select an album and press and hold Q/**ENTER** in the search mode, this album will be played back repeatedly. To go to the previous or next Album, use the Up/Down function.

Press and turn the Double Action encoder to the left.
Returns to the previous item.

Press and turn the Double Action encoder to the right.
Advances to the next item.

- *If you do not perform a search or only search for a song name or audiobook, this function is not valid.*
- *During an artist search, albums for that artist can be played.*
- *If an album is selected during an artist search, the Up/Down function can be used to play other albums by that artist.*
- *This function is inactive during shuffle playback.*
- *This function is available in USB/Portable audio player mode.*

Search Position Memory

During iPhone/iPod playback, you can quickly return to the last-selected hierarchy level in the search mode.

1 Press ⏎.
The hierarchy you selected last in the search mode is displayed.

Random Play Shuffle (M.I.X.)

1 Press **FUNCTION/SETUP**.

2 Turn the **Double Action encoder** to select M I X, and press Q/**ENTER**.
The Shuffle mode is activated.

3 Turn the **Double Action encoder** to select the M I X (Shuffle) playback mode, and press Q/**ENTER**.

M I X ALBUM	✕	: An album in the iPhone/iPod is selected at random, and is played back in the album song order.
SONG	✕	: If you select a song in the search mode, all songs in the selected mode are played back at random.
OFF		: Shuffle mode off.

4 Press **FUNCTION/SETUP**.
The songs will be played back in random sequence.

- *If no operation is performed for 10 seconds, the unit will return to normal mode.*
- *To cancel, select OFF in the above procedure.*
- *Shuffle Album/Shuffle Song works the same way as iPhone/iPod Shuffle Albums/Shuffle Songs.*

Random Play Shuffle All

Shuffle ALL plays all songs in the iPhone/iPod randomly.

1 Press Q/**ENTER**.
The Menu Select screen is displayed.

2 Press Q/**ENTER** while selecting SHUFFLE ALL.
The indicator ✕ **ALL** lights, and the songs will be played back in random sequence.

- *To cancel, set the Shuffle mode to OFF. Refer to "Random Play Shuffle (M.I.X.)" (page 12).*
- *If SHUFFLE ALL is selected, the selected ones which are being played back in the search mode are canceled.*

Repeat Play

1 Press **FUNCTION/SETUP**.
The Function screen is displayed.

2 Press Q/**ENTER**.
The Repeat mode is activated.

3 Turn the **Double Action encoder** to select REPEAT SONG, and press Q/**ENTER**.

REPEAT SONG	⟲	: A single song is repeatedly played back.
OFF		: Repeat mode off.

4 Press **FUNCTION/SETUP**.
The song is repeatedly played back.

- *If no operation is performed for 10 seconds, the unit returns to normal mode.*
- *To cancel, select OFF in the above procedure.*
- *During repeat playback, no other songs are selectable by pressing ◄◄ or ►►.*

Changing the Display

Press VIEW.

Track No. Elapsed Time → Song Name*¹ / Artist Name*¹ → Song Name*¹ / Album Name*¹ →

Calendar Clock → Track No. Elapsed Time
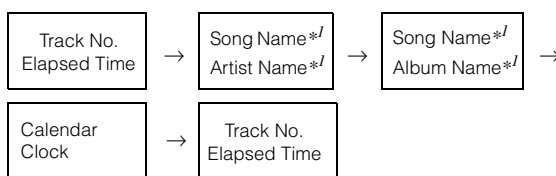
*¹ TAG information
"ARTIST"/"ALBUM"/"SONG" is displayed if there is no tag information.

- *Only alphanumeric characters can be displayed.*
- *The maximum number of characters is 128 (128 byte).*
- *Some characters may not be correctly displayed.*
- *"NO SUPPORT" is displayed when text information is not compatible with this unit.*

USB memory/Portable audio player/Changer (Optional)

⏻ SOURCE ┃ **Double Action encoder** ┃ **FUNCTION/SETUP**
I◀◀ ▶▶I

BAND ▶/II ↩ ⌕/ENTER PRESET VIEW
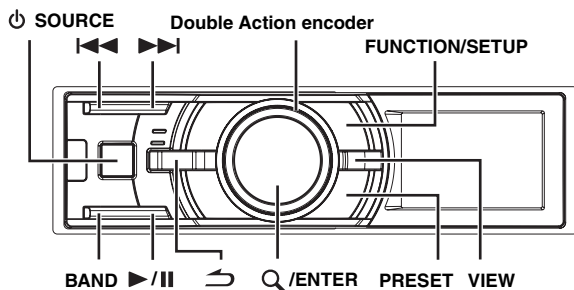
If a USB memory device/Portable audio player or changer is connected to the unit, MP3/WMA/AAC files can be played back.

• *In the USB mode, when this unit is reset, ACC is switched from OFF to ON, or when the USB is connected to this unit, "BANKING" is displayed for several seconds.*

Using the USB Memory Banking Function

1. What is a Bank?
A bank is a unit of up to 1,000 songs, which is stored in memory. "Banking" refers to the grouping of songs available in USB memory, in banks of 1,000 songs each.

2. About Banking
While a bank is being built up, "BANKING" is displayed. Banking occurs whenever a USB memory device is connected or after power to the head unit turns on.
It can take anywhere from a few seconds to up to 10 minutes for banking to complete. This depends on the number of files and folders in USB memory.

3. Available operations while Banking
• Search functions, such as album search or tag information (artist display, etc.) are available. However, during Banking, the information display changes so the VIEW operation is not available.
• With a song playing, Regular fast-forwarding and next song selection is available.
• While Banking, the song playback order may differ from the song order in the USB memory device.

BANK Function (USB memory)

This unit has a BANK function that automatically divides every 1,000 songs stored in USB memory into individual banks to make searching and playing back a song easier. A maximum of 1,000 songs for one bank can be stored according to the order stored in USB memory. A maximum of 10 banks (10,000 songs) can be recognized. BANK1 (songs 1 to 1,000) is set as the default. If you want to search beyond 1,000 songs, perform the following operation to select a different bank.

BANK No.	Song number
BANK1	1~1,000
BANK2	1,001~2,000
⋮	⋮
BANK10	9,001~10,000

1 Press **PRESET**.
The BANK selection mode is displayed.

2 Turn the **Double Action encoder**.
Select the desired BANK.
You can scroll the page by pressing and turning the Double Action encoder.

3 Press ⌕ **/ENTER**.
Each operation can be performed in the selected bank.

• *Even if the files are contained in the same folder, they may be saved as different BANK.*

Playback

## 1 Press ⏻ **SOURCE** to select the USB AUDIO or CHANGER mode.

2 Press I◀◀ or ▶▶I to select the desired track (file).

Returning to the beginning of the current track (file):
Press I◀◀ .

Fast backward:
Press and hold I◀◀ .

Advancing to the beginning of the next track (file):
Press ▶▶I .

Fast forward:
Press and hold ▶▶I .

• *When a Portable audio player is connected, fast-forwarding/fast-reversing is not available.*

3 To pause playback, press ▶/II .
Pressing ▶/II again will resume playback.

• *WMA format files that are protected by DRM (Digital Rights Management), AAC format files that have been purchased from the iTunes Store and files that are copy-protected (copyright protection) cannot be played back on this unit.*
• *The playback time may not be correctly displayed when a VBR (Variable Bit Rate) recorded file is played back.*
• *If there is tag information, artist name/album name/track name is displayed.*
• *ID3 tag/WMA tag*
If an MP3/WMA/AAC file contains ID3 tag/WMA tag information, the ID3 tag/WMA tag information is displayed (e.g., song name, artist name, and album name). All other tag data is ignored.
• *"NO SUPPORT" is displayed when text information is not compatible with this unit.*
• *Before disconnecting USB memory, be sure to change to another source or set to pause.*

Selecting a Disc (Changer) (Optional)

An optional 6-disc or 12-disc CD Changer may be connected to this unit if it is Ai-NET compatible. With a CD Changer connected to the Ai-NET input of this unit, the CD Changer will be controllable from this unit.
Using the KCA-410C (Versatile Link Terminal) multiple changers can be controlled by this unit.
See "Multi-Changer Selection (Optional)" on page 14 for selecting the CD Changers.

• *The controls on this unit for CD Changer operation are operative only when a CD Changer is connected.*
• *The DVD changer (optional) is controllable from this unit as well as the CD changer.*

1 Press **PRESET**.
The DISC CHANGE screen is displayed.

2 Turn the **Double Action encoder** to select a disc.
You can scroll the page by pressing and turning the Double Action encoder.

3 Press $\mathbb{Q}$ **/ENTER**.
The selected disc number appears in the display and CD/MP3/WMA/AAC playback starts.

Multi-Changer Selection (Optional)

When using KCA-410C (Versatile Link Terminal), you can connect two changers and two external outputs (AUX).

1 Press ϕ **SOURCE** on this unit to activate the CD CHANGER mode.

2 Press **BAND** to activate the CD Changer Selection mode.
The CD Changer Selection mode remains active for several seconds.

3 Press **BAND** until the desired CD Changer appears on the display.

- *For further details about the external input (AUX) when using KCA-410C, see "Setting the AUX Mode (V-Link)" on page 22.*

Repeat Play

1 Press **FUNCTION/SETUP**.

2 Press $\mathbb{Q}$ **/ENTER**.
The repeat mode is activated.

3 Turn the **Double Action encoder** to select the Repeat playback mode.

USB memory mode :

REPEAT ONE	⟳	: Only a track is repeatedly played back.
FOLDER	⟳	: Only files in a folder are repeatedly played back.
OFF		: Repeat mode is turned off.

Portable audio player mode :

| REPEAT SONG | ⟳ | : Only a track is repeatedly played back. |
| OFF | | : Repeat mode is turned off. |

CD Changer mode :

REPEAT ONE	⟳	: Only a file is repeatedly played back.
FOLDER *	⟳	: Only files in a folder are repeatedly played back.
DISC	⟳	: A disc is repeatedly played back.
OFF		: Repeat mode is turned off.

* *When an MP3 compatible CD changer is connected.*

- *If REPEAT DISC is set to ON during M I X ONE play in CD changer mode, M.I.X. will apply to the current disc only.*

4 Press $\mathbb{Q}$ **/ENTER**.

5 Press **FUNCTION/SETUP**.
The track (file) will be played repeatedly.

- *If no operation is performed for 10 seconds, the unit returns to normal mode.*
- *To cancel, select OFF in the above procedure.*

M.I.X. (Random Play)

1 Press **FUNCTION/SETUP**.

2 Turn the **Double Action encoder** to select M I X.

3 Press $\mathbb{Q}$ **/ENTER**.
The M.I.X. mode is activated.

4 Turn the **Double Action encoder** to select the M I X playback mode.

USB memory mode :

M I X FOLDER	⤨	: Only files in a folder are played back in random sequence.
ALL	⤨ ALL	: All songs in USB memory (current Bank) are played back in random sequence.
OFF		: M.I.X. mode is turned off.

Portable audio player mode :

M I X SONG	⤨	: Only files in a folder are played back in random sequence.
ALL	⤨ ALL	: All songs in Portable audio player are played back in random sequence.
OFF		: M.I.X. mode is turned off.

CD Changer mode :

M I X ONE	⤨	: All files in a disc are played back in random sequence, and playback shifts to the next disc.
FOLDER *¹	⤨	: Only files in a folder are played back in random sequence.
ALL *²	⤨ ALL	: All the tracks on all the CDs in the current magazine will be played back in the random sequence.
OFF		: M.I.X. mode is turned off.

*¹ *When an MP3 compatible CD changer is connected.*
*² *When a CD changer equipped with the ALL M.I.X. function is connected.*

- *When a song is played back during Random (M.I.X.) play in the USB mode, the song can be played back again randomly even if not all songs on the USB Memory have been played back.*
- *If M I X ONE is set to ON during REPEAT DISC play in CD changer mode, M.I.X. will apply to the current disc only.*

5 Press $\mathbb{Q}$ **/ENTER**.

6 Press **FUNCTION/SETUP**.
The tracks (files) will be played back in random sequence.

- *If no operation is performed for 10 seconds, the unit returns to normal mode.*
- *To cancel, select OFF in the above procedure.*

Searching for CD Track Number (CD changer only)

You can search for a song by track number.

1 **Press Q /ENTER during play.**
This will set the search mode.

2 **Turn the Double Action encoder to select the desired track, and then press Q /ENTER.**
This will play the selected track.

- Press ⤺ in the search mode to cancel. Or, the search mode is canceled if no operation is performed for 60 seconds.
- During list selection, if you turn the **Double Action encoder** to the left or right while pressed, the list screen scrolls screen by screen. If you turn and hold the **Double Action encoder** to the left or right while pressed, the list screen continuously scrolls.
- When CD Track Number Search is made during M.I.X. play, the M.I.X. play mode will be canceled.

Searching for a desired Song (USB memory/Portable audio player)

A USB memory device/Portable audio player can contain hundreds of songs. By using file tag information and keeping these songs organized in playlists, this unit's search functions will ease song searches. Each music category has its own individual hierarchy. Use the Playlist/ Artist/Album/Genre/Composer/Song/Folder/File search mode to narrow searches based on the table below.

Hierarchy 1	Hierarchy 2	Hierarchy 3	Hierarchy 4
PLAYLIST	SONG	—	—
ARTIST	ALBUM	SONG	—
ALBUM	SONG	—	—
GENRE	ARTIST	ALBUM	SONG
COMPOSER	ALBUM	SONG	—
SONG	—	—	—
FOLDER	FILE	—	—
FILE	—	—	—

For example: Searching by Artist name
The following example explains how an ARTIST search is performed. Another search mode can be used for the same operation, although the hierarchy differs.

1 **Press Q /ENTER to activate the search selection mode.**

2 **Turn the Double Action encoder to select the ARTIST search mode, and then press Q /ENTER.**
PLAYLIST ↔ ARTIST ↔ ALBUM ↔ GENRE ↔ COMPOSER ↔ SONG ↔ FOLDER ↔ FILE ↔ PLAYLIST

3 **Turn the Double Action encoder to select the desired Artist, and then press Q /ENTER.**

4 **Turn the Double Action encoder to select an album, and then press Q /ENTER.**

5 **Turn the Double Action encoder to select a song and press Q /ENTER.**
The selected song is played back.

- After pressing and holding Q /ENTER for at least 2 seconds while in each hierarchy (except SONG/FILE hierarchy),all songs of the selected hierarchy are played back.
- Press and hold ⤺ for at least 2 seconds in the search mode to cancel.
- While in the Search mode, press ⤺ to switch to the previous mode.
- When search is made during M.I.X. play, the M.I.X. play mode will be canceled.
- "ROOT" is displayed for the root folder which does not have folder name.
- In the search mode, you can scroll the page by pressing and turning the **Double Action encoder**.
- If no operation is performed for 60 seconds, the unit will return to normal mode automatically.
- In the search mode, when there is no tag information in the searched files, "NO DATA" will be displayed, it may also be displayed when searching some files depending on the property of the files.
- In FOLDER/FILE search mode, only the current BANK's folders/ files can be searched.

File/Folder Name Search (MP3 Changer)

Folder and file names may be searched and displayed during playback.

1 **During MP3/WMA/AAC playback, press Q /ENTER to activate the search mode.**

2 **Turn the Double Action encoder to select Folder Name Search mode or File Name Search mode, and then press Q /ENTER.**

- - - - - - - - - - - - - - - - - - - -

Folder Name Search mode

3 **Turn the Double Action encoder to select the desired folder.**
You can scroll the page by pressing and turning the Double Action encoder.

4 **Press and hold Q /ENTER for at least 2 seconds to play back the first file in the selected folder.**

- Press and hold ⤺ for at least 2 seconds in the search mode to cancel. Or, the search mode is cancelled if no operation is performed for 60 seconds.
- To search for files in the Folder Name Search mode, press Q /ENTER. Files in the folder may be searched.
- Press ⤺ to exit Folder Name Search mode in step 3 in order to select File Name Search mode.
- "ROOT" is displayed for the root folder which does not have folder name.
- When Folder Name Search is made during M.I.X. play, the M.I.X. play mode will be canceled.

3 **Select the desired file by turning the Double Action encoder.**

You can scroll the page by pressing and turning the Double Action encoder.

4 **Press /ENTER to play back the selected file.**

- *Press and hold for at least 2 seconds in the search mode to cancel. Or, the search mode is canceled if no operation is performed for 60 seconds.*
- *Press in the search mode to return to the previous mode.*
- *When File Name Search is made during M.I.X. play, the M.I.X. play mode will be cancelled.*

Quick Search (changer)

You can search for tracks (files).

1 **Press and hold /ENTER for at least 2 seconds in the Changer mode to activate Quick Search mode.**

2 **Turn the Double Action encoder to select a desired track (file).**

The selected track is played back immediately.

- *Press in the search mode to cancel. Or, the search mode is canceled if no operation is performed for 10 seconds.*

Select the desired Folder (Folder up/down) (MP3/WMA/AAC)

Press and turn the Double Action encoder to select the desired folder.

Turning to the right will advance to the next folder.
Turning to the left will return to the previous folder.
The first file in the selected folder is played back.

- *USB Memory/Portable Audio Player*
  During playback in normal mode, if you press and turn the Double Action encoder before you perform a search operation, the FOLDER UP/DOWN function will become active.
  During playback in normal mode, if you press and turn the Double Action encoder after you perform a search operation, the Up/Down Function will become active. For details, refer to "Up/Down Function" on page 12.

Changing the Display

Press VIEW.

USB/Portable audio player mode:
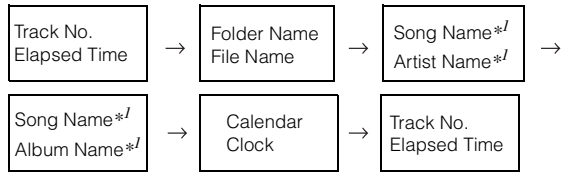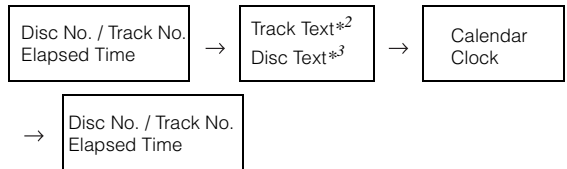
Track No. Elapsed Time → Folder Name File Name → Song Name*[1] Artist Name*[1] →

Song Name*[1] Album Name*[1] → Calendar Clock → Track No. Elapsed Time

CD Changer mode:

Disc No. / Track No. Elapsed Time → Track Text*[2] Disc Text*[3] → Calendar Clock

→ Disc No. / Track No. Elapsed Time

MP3 Changer mode:

Disc No. / Folder No. / File No. Elapsed Time → Folder Name File Name →

Song Name*[1] Artist Name*[1] → Song Name*[1] Album Name*[1] → Calendar Clock

→ Disc No. / Folder No. / File No. Elapsed Time
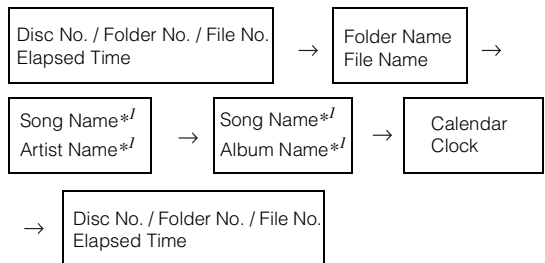
[1] TAG information
"ARTIST"/"ALBUM"/"SONG" is displayed if there is no tag information.
[2] "T TEXT" is displayed if there is no Track Text.
[3] "D TEXT" is displayed if there is no Disc Text.

- *Only alphanumeric characters can be displayed.*
- *The maximum number of characters is 128 (128 byte) for USB and Portable audio player.*
- *The maximum number of characters is 64 (64byte) for Changer.*
- *Some characters may not be correctly displayed.*
- *"NO SUPPORT" is displayed when text information is not compatible with this unit.*

About MP3/WMA/AAC

CAUTION

Except for private use, duplicating audio data (including MP3/ WMA/AAC data) or distributing, transferring, or copying it, whether for free or for a fee, without permission of the copyright holder is strictly prohibited by the Copyright Act and by international treaty.

What is MP3?

MP3, whose official name is "MPEG-1 Audio Layer 3," is a compression standard prescribed by the ISO, the International Standardization Organization and MPEG which is a joint activity institution of the IEC.

MP3 files contain compressed audio data. MP3 encoding is capable of compressing audio data at extremely high ratios, reducing the size of music files to as much as one-tenth their original size. This is achieved while still maintaining near CD quality. The MP3 format realizes such high compression ratios by eliminating the sounds that are either inaudible to the human ear or masked by other sounds.

What is AAC?

AAC is the abbreviation for "Advanced Audio Coding," and is a basic format of audio compression used by MPEG2 or MPEG4.

What is WMA?

WMA, or "Windows Media™ Audio," is compressed audio data. WMA is similar to MP3 audio data and can achieve CD quality sound with small file sizes.

Method for creating MP3/WMA/AAC files

Audio data is compressed by using MP3/WMA/AAC specified software. For details on creating MP3/WMA/AAC files, refer to the user's manual for that software.
MP3/WMA/AAC file extensions that can be played back on the unit are as follows:
MP3: "mp3"
WMA: "wma" (ver. 7.1, 8, 9, 9.1, 9.2 supported)
AAC: "m4a"
WMA is not supported for the following files, Windows Media Audio Professional, Windows Media Audio 9 Voice or Windows Media Audio 9 Pro Lossless.

Depending on the software that is used to create AAC, the file format may differ from the extension.
Playback of AAC files encoded by iTunes is supported.

Supported playback sampling rates and bit rates

MP3
Sampling rates:	48 kHz, 44.1 kHz, 32 kHz, 24 kHz, 22.05 kHz, 16 kHz, 12 kHz, 11.025 kHz, 8 kHz
Bit rates:	32 - 320 kbps

WMA
Sampling rates:	48 kHz, 44.1 kHz, 32 kHz, 24 kHz, 22.05 kHz, 16 kHz
Bit rates:	16 - 320 kbps

AAC
Sampling rates:	48 kHz, 44.1 kHz
Bit rates:	8 - 576 kbps

This device may not play back correctly depending on sampling rates.
The playback time may not be correctly displayed when a VBR (Variable Bit Rate) recorded file is played back.

ID3 tags/WMA tags

This device supports ID3 tag v1 and v2.2.0, v2.3.0 and WMA tag. The following files do not support compression, coding, grouping or non-synchronization.
If tag data is in an MP3/WMA/AAC file, this device can display the title (track title), artist name, and album name ID3 tag/WMA tag data.
This device can only display single-byte alphanumeric characters and the underscore. For non-supported characters, "NO SUPPORT" is displayed.
If information contains characters other than ID3 tag information, the audio file may not be played back.
The tag information may not be correctly displayed, depending on the contents.
Do not make a file's playback time more than 1 hour.

Playing back MP3/WMA/AAC

MP3/WMA/AAC files are prepared, and then written to USB memory. Or, synchronize an MP3/WMA file using Windows Media Player (Ver. 7.1, 8, 9, 9.1, 9.2), and then forward to the Portable audio player.
A USB memory device can hold up to 10,000 files/1000 folders (including Root Folders). Playback may not be performed if a USB memory / Portable audio player device exceeds the limitations described above.
Do not make a file's playback time more than 1 hour.

Media supported

This device can play back USB memory / Portable audio player media.

Corresponding File Systems

This device supports FAT 12/16/32.

Terminology

Bit rate

This is the "sound" compression rate specified for encoding. The higher the bit rate, the higher the sound quality, but also the larger the files.

Sampling rate

This value shows how many times per second the data is sampled (recorded). For example, music CDs use a sampling rate of 44.1 kHz, so the sound is sampled (recorded) 44,100 times per second. The higher the sampling rate, the higher the sound quality, but also the larger the volume of data.

Encoding

Converting music CDs, WAVE (AIFF) files, and other sound files into the specified audio compression format.

Tag

Song information such as track titles, artist names, album names, etc., written into MP3/WMA/AAC files.

Root folder

The root folder is found at the top of the file system. The root folder contains all folders and files.

Sound Setting
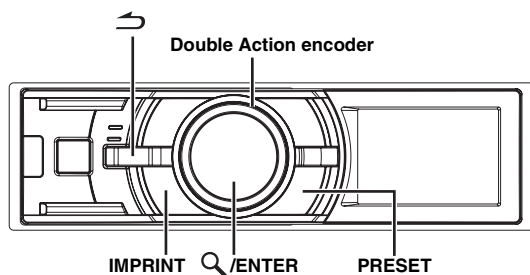
Double Action encoder

IMPRINT Q/ENTER PRESET

Adjusting Subwoofer/Bass/Treble/Balance (Between Left and Right)/Fader (Between Front and Rear)/Loudness/Defeat

1 Press **IMPRINT** repeatedly to choose the desired mode.

Each press changes the mode as follows:

SUBW LV*[1] → BASS LV → TREBLE LV → BALANCE LV → FADER LV*[2] → LOUD*[3] → DEFEAT → VOLUME → SUBW LV*[1]

Subwoofer: +0 ~ +15
Bass level: –7 ~ +7
Treble level: –7 ~ +7
Balance: –15 ~ +15
Fader: –15 ~ +15
Loudness : ON/OFF
Defeat : ON/OFF
Volume: 0 ~ 35

- *If **IMPRINT** is not pressed within 5 seconds after selecting the Subwoofer, Bass, Treble, Balance or Fader mode, the unit automatically returns to normal mode.*
- *Loudness introduces a special low-and high-frequency emphasis at low listening levels. This compensates for the ear's decreased sensitivity to bass and treble sound. The function is inoperable when DEFEAT is set to ON.*

*[1] When the subwoofer mode is set to OFF, its level cannot be adjusted.
*[2] If you set the 4.2ch (FRONT/REAR/SUBW.)/2.2ch (3WAY) switch of the IMPRINT audio processor (PXA-H100) to 2.2ch (3WAY), you cannot adjust the FADER mode. For details, refer to the Owner's Manual of PXA-H100.
*[3] When an external audio processor is connected, this setting cannot be made.

2 Turn the **Double Action encoder** until the desired sound is obtained in each mode.

- *Depending on the connected devices, some functions and display indications do not work.*

Turning Subwoofer ON/OFF

When the subwoofer is on, you can adjust the subwoofer output level (refer to page 18).
For this unit, the following setting can be made only when the IMPRINT audio processor (PXA-H100) is not connected.

1 Press and hold **IMPRINT** for at least 2 seconds to activate the AUDIO selection mode.

2 Turn the **Double Action encoder** to select the SUBW mode, and then press Q/**ENTER**.

SUBW ↔ SUBW SYSTEM* ↔ BASS ↔ TREBLE ↔ HPF ↔ SUBW

* *Displayed only when subwoofer is ON.*

3 Turn the **Double Action encoder** to select SUBW ON/OFF, and then press Q/**ENTER**.

ON ↔ OFF

4 Press ⏏ to return to normal mode.

- *If no operation is performed for 15 seconds, the unit will return to normal mode automatically.*
- *If ⏏ is pressed during setting, the unit returns to the previous item.*

Setting the Subwoofer System

When the subwoofer is on, you can select either SYS 1 or SYS 2 for the desired subwoofer effect.
For this unit, the following setting can be made only when the IMPRINT audio processor (PXA-H100) is not connected.

1 Press and hold **IMPRINT** for at least 2 seconds to activate the AUDIO selection mode.

2 Turn the **Double Action encoder** to select the SUBW SYSTEM mode, and then press Q/**ENTER**.

SUBW ↔ SUBW SYSTEM* ↔ BASS ↔ TREBLE ↔ HPF ↔ SUBW

* *Displayed only when subwoofer is ON.*

3 Turn the **Double Action encoder** to select the SUBW SYS 1 or SUBW SYS 2, and then press Q/**ENTER**.

SYS 1 ↔ SYS 2

SYS 1 : Subwoofer level changes according to the main volume setting.
SYS 2 : Subwoofer level change is different from the main volume setting. For example, even at low volume settings, the subwoofer is still audible.

4 Press ⏏ to return to normal mode.

- *If no operation is performed for 15 seconds, the unit will return to normal mode automatically.*
- *If ⏏ is pressed during setting, the unit returns to the previous item.*
- *This function is inoperable when Subwoofer is set to OFF.*

Setting the Bass Control

You can change the Bass Frequency emphasis to create your own tonal preference.

For this unit, the following setting can be made only when the IMPRINT audio processor (PXA-H100) is not connected.

1 Press and hold **IMPRINT** for at least 2 seconds to activate the AUDIO selection mode.

2 Turn the **Double Action encoder** to select the BASS Adjustment mode, and then press $\mathbb{Q}$**/ENTER**.

SUBW ↔ SUBW SYSTEM* ↔ BASS ↔ TREBLE ↔ HPF ↔ SUBW

* *Displayed only when subwoofer is ON.*

Setting the Bass Level

3-1 *[1]* Turn the **Double Action encoder** to select the desired bass level (–7~+7), and then press $\mathbb{Q}$**/ENTER**.

You can emphasize or weaken the bass level.

Setting the Bass Bandwidth

3-2 Turn the **Double Action encoder** to select the desired bass bandwidth, and then press $\mathbb{Q}$ **/ENTER**.

$$\longrightarrow \quad 1 \quad \leftrightarrow \quad 2 \quad \leftrightarrow \quad 3 \quad \leftrightarrow \quad 4 \quad \longleftarrow$$
(Narrow) ←································→ (Wide)

Changes the boosted bass bandwidth to wide or narrow. A wider setting will boost a wide range of frequencies above and below the center frequency. A narrower setting will boost only frequencies near the center frequency.

Setting the Bass Center Frequency

3-3 Turn the **Double Action encoder** to select the desired bass center frequency, and then press $\mathbb{Q}$**/ENTER**.

80 (Hz) ↔ 100 (Hz) ↔ 200 (Hz) ↔ 60 (Hz) ↔ 80 (Hz)

Emphasizes the displayed bass frequency ranges.

4 Press ⤺ to return to normal mode.

• *If no operation is performed for 15 seconds, the unit will return to normal mode automatically.*
• *If ⤺ is pressed during setting, the unit returns to the previous item.*
• *The function is inoperable when DEFEAT is set to ON.*

[1] The adjustment can also be made by pressing IMPRINT. Refer to "Adjusting Subwoofer/Bass/Treble/Balance (Between Left and Right)/Fader (Between Front and Rear)/Loudness/Defeat" (page 18).

Setting the Treble Control

You can change the Treble Frequency emphasis to create your own tonal preference.

For this unit, the following setting can be made only when the IMPRINT audio processor (PXA-H100) is not connected.

1 Press and hold **IMPRINT** for at least 2 seconds to activate the AUDIO selection mode.

2 Turn the **Double Action encoder** to select the TREBLE Adjustment mode, and then press $\mathbb{Q}$**/ENTER**.

SUBW ↔ SUBW SYSTEM* ↔ BASS ↔ TREBLE ↔ HPF ↔ SUBW

* *Displayed only when subwoofer is ON.*

Setting the Treble Level

3-1 *[2]* Turn the **Double Action encoder** to select the desired treble level (–7~+7), and then press $\mathbb{Q}$**/ENTER**.

You can emphasize the treble level.

Setting the Treble Center Frequency

3-2 Turn the **Double Action encoder** to select the desired treble center frequency, and then press $\mathbb{Q}$**/ENTER**.

10.0 kHz ↔ 12.5 kHz ↔ 15.0 kHz ↔ 17.5 kHz ↔ 10.0 kHz

Emphasizes the displayed treble frequency ranges.

4 Press ⤺ to return to normal mode.

• *If no operation is performed for 15 seconds, the unit will return to normal mode automatically.*
• *If ⤺ is pressed during setting, the unit returns to the previous item.*
• *The function is inoperable when DEFEAT is set to ON.*

[2] The adjustment can also be made by pressing IMPRINT. Refer to "Adjusting Subwoofer/Bass/Treble/Balance (Between Left and Right)/Fader (Between Front and Rear)/Loudness/Defeat" (page 18).

Adjusting the High Pass Filter

The High Pass Filter on this unit can be adjusted to suit your personal taste.

For this unit, the following setting can be made only when the IMPRINT audio processor (PXA-H100) is not connected.

1 Press and hold **IMPRINT** for at least 2 seconds to activate the AUDIO selection mode.

2 Turn the **Double Action encoder** to select the HPF Adjustment mode, and then press **⊙ /ENTER.**

SUBW ↔ SUBW SYSTEM* ↔ BASS ↔ TREBLE ↔ HPF ↔ SUBW

* Displayed only when subwoofer is ON.

3 Turn the **Double Action encoder** to select the desired HPF frequency, and then press **⊙ /ENTER.**

OFF ↔ 80 (Hz) ↔ 120 (Hz) ↔ 160 (Hz)

4 Press ⏏ to return to normal mode.

- *If no operation is performed for 15 seconds, the unit will return to normal mode automatically.*
- *If ⏏ is pressed during setting, the unit returns to the previous item.*
- *The function is inoperable when DEFEAT is set to ON.*

Operating the External Audio Processor

You can call up the preset memory of the external audio processor from this unit.

1 Press and hold **PRESET** for at least 2 seconds to call the external audio processor mode when the external audio processor is connected.
The AP Preset screen is displayed.

2 Turn the **Double Action encoder** to select the preset number, and press **⊙ /ENTER.**

- *For the operation of external audio processor, refer to the Owner's Manual of the external audio processor you purchased.*

SETUP

Use the SETUP menu to flexibly customize the unit to suit your own preferences and usage. Choose settings from GENERAL, DISPLAY, etc., to make the desired changes.

⏻ SOURCE   Double Action encoder

FUNCTION/SETUP

BAND   ⏏   ⊙ /ENTER
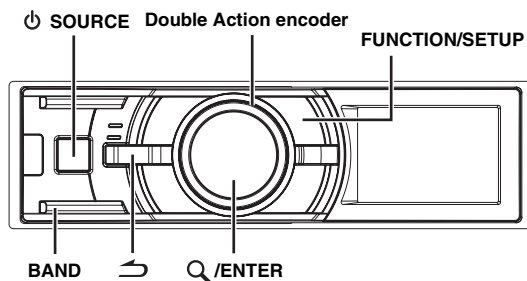
Follow steps 1 to 5 to choose an item to change. See the item descriptions following Step 5 for further details.

1 Press and hold **FUNCTION/SETUP** for at least 2 seconds to activate the SETUP selection mode.

2 Turn the **Double Action encoder** to select the desired item, and then press **⊙ /ENTER.**

BT*[1] ↔ AUDIO*[2] ↔ GENERAL ↔ DISPLAY ↔ IPOD ↔ TUNER*[3] ↔ BT
(e.g. Select GENERAL)

[1] Displayed only when INT MUTE is set to OFF, and the mode is set to other than BT AUDIO.
[2] Displayed only when an external audio processor is connected. For details, refer to the Owner's Manual of the external audio processor.
[3] Only when HD / SAT receiver is connected.

3 Turn the **Double Action encoder** to select a setting item, and then press **⊙ /ENTER.**
(e.g. Select POWER IC)

BT:
    BT IN
AUDIO*[4]:
    USER PRESET*[5] ↔ MX*[5] ↔ SUBW*[5] ↔ MX LEVEL*[6] ↔ USER PRESET*[5]

GENERAL:
    CALENDAR ↔ CALENDAR ADJ*[7] ↔ CLK MODE ↔ CLK ADJ*[8] ↔ PLAY MODE ↔ BEEP ↔ INT MUTE*[9] ↔ AUX+ ↔ AUX+ NAME*[10] ↔ AUX ↔ AUX NAME*[10] ↔ CHANGER NAME ↔ DIGITAL AUX ↔ D-AUX NAME*[11] ↔ AUX IN GAIN*[12] ↔ POWER IC ↔ DEMO ↔ CALENDAR

DISPLAY:
  DIMMER ↔ SCROLL TYPE ↔ TEXT SCROLL ↔ DIMMER

IPOD:
  PLAYLISTS ↔ ARTISTS ↔ ALBUMS ↔ PODCASTS ↔ AUDIOBOOKS ↔ GENRES ↔ COMPOSERS ↔ SONGS ↔ PLAYLISTS

TUNER:
  XM ADF*[13] ↔ GAME ALERT*[13] ↔ STATION CALL*[14] ↔ DIGITAL SEEK*[14] ↔ XM ADF*[13]

*[4] *If IMPRINT audio processor is connected, you can make more detailed settings for the audio setting. For details, refer to "IMPRINT Operation (Optional)" (page 29).*
*[5] *Displayed only when an external audio processor is connected.*
*[6] *Displayed only when MX is set to ON and an external audio processor is connected.*
*[7] *Refer to "Setting the Calendar" (page 7).*
*[8] *Refer to "Setting the Time" (page 7).*
*[9] *Displayed only when BT IN is OFF.*
*[10] *The setting can be made only when AUX+/AUX is set to ON.*
*[11] *Displayed only when DIGITAL AUX is set to ON.*
*[12] *Displayed only when AUX+ is set to ON.*
*[13] *Displayed only when SAT radio receiver is connected. For the SAT Radio Setting, refer to "SAT Radio Receiver (Optional)" (page 24).*
*[14] *Displayed only when HD Radio TUNER MODULE (TUA-T500 HD) is connected.*

4 **Turn the Double Action encoder to change the setting, and then press ⌕/ENTER.**
   (e.g. Select POWER IC ON or POWER IC OFF.)

5 **Press and hold ⤺ for 2 seconds to return to normal mode.**

• *Pressing ⤺ during the procedure will return to the previous mode.*
• *If no operation is performed for 60 seconds, the unit will return to normal mode automatically.*

Bluetooth Setting

Select BT from the setup main menu in step 2 above.
If an optional Bluetooth INTERFACE (KCE-400BT) is connected, you can place a hands-free call by a Bluetooth-equipped mobile phone. Make this setting when the Bluetooth INTERFACE (KCE-400BT) is connected and the Bluetooth function is used. For details, refer to the Owner's Manual of the optional Bluetooth INTERFACE (KCE-400BT).
Set ADPT when the Bluetooth INTERFACE (KCE-400BT) is connected.

• *The ☎ button can be used only when the optional Bluetooth INTERFACE (KCE-400BT) is connected.*
• *If the mobile phone compatible with the Voice Dial function is connected, the Voice Dial function can be used.*
• *When INT MUTE is set to ON, the Bluetooth setting cannot be made. When the Bluetooth INTERFACE (KCE-400BT) is connected, set INT MUTE to OFF. Refer to "Turning Mute Mode On/Off (INT MUTE)" (page 22).*

Setting the Bluetooth Connection
 BT IN ADPT / BT IN OFF (Initial setting)

Audio Setting (Only when external audio processor is connected)

AUDIO is selected on the setup menu in step 2.

Operating the External Audio Processor (USER PRESET)
 PRE-1 (Initial setting) / PRE-2 / PRE-3 / PRE-4 / PRE-5 / PRE-6

Turn the **Double Action encoder** to select the desired preset number, and then press ⌕/ENTER.
In normal mode, you can also call up the preset memory of the external audio processor by pressing and holding "**PRESET**" for at least 2 seconds. Refer to "Operating the External Audio Processor" on page 20.

• *For the operation of external audio processor, refer to the Owner's Manual of the external audio processor you purchased.*

Turning Media Xpander ON/OFF
 OFF (Initial setting) / ON

When the Media Xpander is on, and external audio processor is connected, you can adjust the Media Xpander level.

Setting the MX Level
 NON EFFECT / LEVEL 1 / LEVEL 2 / LEVEL 3

MX (Media Xpander) makes vocals or instruments sound distinct regardless of the music source. The FM radio, CD, USB memory and iPhone/iPod, will be able to reproduce the music clearly even in cars with a lot of road noise. The initial setting is different depending on the source.

Subwoofer On and Off
 SUBW ON (Initial setting) / SUBW OFF

The adjustment can also be made by pressing and holding IMPRINT* for at least 2 seconds. Refer to "Turning Subwoofer ON/OFF" (page 18).

* *For this unit, when connecting IMPRINT audio processor, you can't turn the subwoofer ON or OFF by pressing IMPRINT.*

General Setting

GENERAL is selected on the setup main menu in step 2.

Setting of Calendar Display Pattern Switching (CALENDAR)
M/D/Y (Initial setting) / Y/M/D / D/M/Y

You can switch the calendar display pattern to be shown when the time is displayed.

Y : shows the year
M : shows the month
D : shows the day
ex. M/D/Y → 01/01/09

Setting the Clock Display (CLK MODE)
24H / 12H (Initial setting)

You can select the clock display type, 12-hour or 24-hour, depending on your preference.

Connecting an MP3 Changer (PLAY MODE)
CD-DA (Initial setting) / CD-DA&MP3

Perform this setting when connecting MP3 changer. MP3 changer can playback CDs containing both CD and MP3 data. However, in some situations (some enhanced CDs), playback may be difficult. For these special cases, you can select playback of CD data only. When a disc contains both CD or the MP3 data, playback starts from the CD data portion of the disc.

CD-DA : Only CD data can be played back.
CD-DA&MP3 : Both CD data and MP3 file tracks can be played back.

• *Change discs after performing this setting.*

Sound (Beep) Guide Function
BEEP ON (Initial setting) / BEEP OFF

This function will give audible feedback with varying tones depending upon the button pressed.

Turning Mute Mode On/Off (INT MUTE)
INT MUTE ON / INT MUTE OFF (Initial setting)

If a device having the interrupt feature is connected, audio will be automatically muted whenever the interrupt signal is received from the device.

• *When Bluetooth is set to ADPT, INT MUTE cannot be set. Refer to "Setting the Bluetooth Connection" (page 21).*
• *When the Bluetooth INTERFACE (KCE-400BT) is connected, set INT MUTE to OFF.*

Setting the AUX+ Mode
AUX+ ON / AUX+ OFF (Initial setting)

You can input the audio of an external device, (such as a Portable audio player) to the Bluetooth interface connector of this unit. A special Conversion cable (KCE-237B) is necessary to adapt the Bluetooth interface connector as an AUX IN.

An external device and a Bluetooth INTERFACE (KCE-400BT) cannot be connected at the same time.

AUX+ ON : Set to ON when an external device is connected. If ⏻ SOURCE is pressed and AUX+ is selected, the sound of the external device is input to the unit.
AUX+ OFF : When set to OFF, AUX+ source cannot be selected.

Setting the AUX+ NAME Mode
AUX (Initial setting) / TV / DVD / PORTABLE / GAME

You can change the AUX+ NAME when AUX+ is ON.

Setting the AUX Mode (V-Link)
AUX ON / AUX OFF (Initial setting)

You can input TV/video sound by connecting an optional Ai-NET/RCA Interface cable (KCA-121B) or Versatile Link Terminal (KCA-410C) to this component.
You can change the AUX NAME display when AUX is set to ON. Press 🔍/ENTER when AUX is set to ON, and select AUX NAME by turning the **Double Action encoder**, then press 🔍/ENTER. After that, turn the **Double Action encoder** to select the desired AUX name.
If the KCA-410C is connected, it is possible to select two AUX names.

• *Via KCA-410C, up to 2 external devices with RCA output can be connected. In this case, press ⏻ SOURCE to select AUX mode and then press BAND to select your desired device.*

Setting the Changer Name
CHANGER (Initial setting) / PORTABLE

When an optional changer is connected, you can set the displayed mode name.

• *The setting can be made only when a changer is connected. When two changers are connected, the CHANGER1 NAME/CHANGER2 NAME is displayed, and the setting can be made respectively.*

Setting the External Digital Input (DIGITAL AUX)
DIGITAL AUX ON / DIGITAL AUX OFF (Initial setting)

When an ALPINE Ai-NET compatible digital audio processor (PXA-H701) and a DVD player (DVE-5207) not compatible with Ai-NET are connected, set DIGITAL AUX to ON to enjoy 5.1-channel surround sound.
You can change the D-AUX Name when DIGITAL AUX is set to ON. Press 🔍/ENTER when DIGITAL AUX is set to ON, and select D-AUX NAME by turning **Double Action encoder**, then press 🔍/ENTER.

• *Press ⏻ SOURCE , and select the D-AUX mode, and adjust the volume, etc.*
• *After input selection is completed, turn the ignition off and back on again. Setting of the optical digital input switch is completed.*
• *Depending on the connected audio processor, DVD player sound may continue to be output, even though the source is changed to another one. If this occurs, set the DVD player's power to OFF.*

Setting the AUX+ Level (AUX IN GAIN)
LOW (Initial setting) / HI

After setting to ON in "Setting the AUX+ Mode", this setting can be carried out.

LOW : Decreases the external input audio level.
HI : Increases the external input audio level.

Connecting to an External Amplifier (POWER IC)
ON (Initial setting) / OFF

When an external amplifier is connected, sound quality can be improved by stopping the power supply of the built-in amplifier.

POWER IC OFF : Use this mode when the front pre-amplifier of the unit is used to drive an external amplifier connected to the speakers. In this setting, the head unit's internal amplifier has no output to drive speakers.
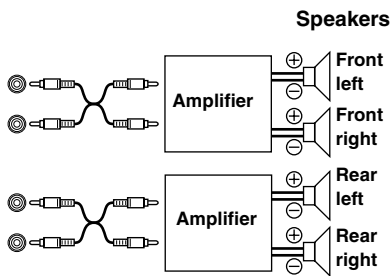
Speakers

POWER IC ON : The speakers are driven by the built-in amplifier.

Speakers
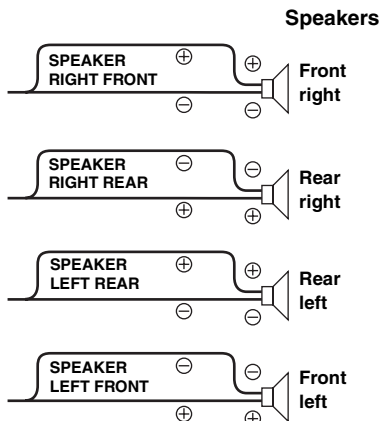
• *No sound is produced by the system when the POWER IC is set to OFF.*

Demonstration
DEMO ON / DEMO OFF (Initial setting)

This unit has a Demonstration feature for the display.

• *To quit Demo mode, set to DEMO OFF.*

Display Setting

DISPLAY is selected on the setup main menu in step 2.

Dimmer Control
MANUAL / AUTO (Initial setting)

Set the Dimmer control to AUTO to decrease the illumination brightness of the unit with the head lights of the vehicle ON. This mode is useful if you feel the unit's backlighting is too bright at night.

Scroll Type Setting
TYPE1 / TYPE2 (Initial setting)

Choose from two scrolling methods.
Select the type you prefer.

TYPE1 : The characters scroll from right to left, a single character at a time.

TYPE2 : Words are built up from left to right, a single character at a time. When the display is filled, it is cleared and the remaining words are displayed the same way until all words of the title have been shown.

Scroll Setting (TEXT SCROLL)
AUTO / MANUAL (Initial setting)

You can set a scroll type such as song title or file name on the source screen. If the search mode screen displays fills with text, the display scrolls.

TEXT SCROLL AUTO : Text information are scrolled automatically.

TEXT SCROLL MANUAL : The first display scrolls text information one time only.

• *In parts of the display, scrolling may not occur, or scroll content may differ.*

• *Regardless of this setting, if the display is filled with text, the display scrolls.*

iPod Setting

IPOD is selected on the setup main menu in step 2.

iPod Search Mode Setting
ON / OFF

The unit allows you to search for the iPhone/iPod using eight different search modes.
When the search mode is in PLAYLISTS/ARTISTS/ALBUMS/PODCASTS/AUDIOBOOKS, the initial setting is ON, and when the search mode is in GENRES/COMPOSERS/SONGS, the initial setting is OFF.

• *For search mode details, refer to "Searching for a desired Song/Title" (page 10).*

TUNER Setting (Only when HD/SAT receiver is connected)

TUNER is selected on the setup main menu in step 2.

HD Radio Station Call Setting
STATION CALL LONG / STATION CALL SHORT (Initial setting)

In the HD radio mode, the number of display characters for the HD radio station name can be selected.

LONG : 56 characters
SHORT : 7 characters (FM)
4 characters (AM)

Digital Seek On/Off Setting
DIGITAL SEEK ON / DIGITAL SEEK OFF (Initial setting)

ON : SEEK UP/DOWN is used only for Digital Radio Station.
OFF : SEEK UP/DOWN is used for all Radio Stations.

SAT Radio Receiver (Optional)

Double Action encoder

◄◄ ►►| FUNCTION/SETUP

BAND ►/II ⏏ 🔍/ENTER PRESET VIEW
⏻ SOURCE
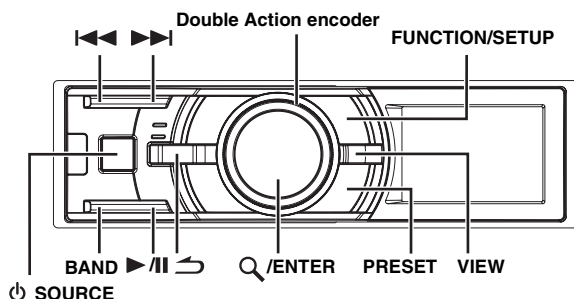
SAT Receiver: XM or SIRIUS Receiver
When an optional XM or SIRIUS Receiver Box is connected via the Ai-NET bus, the following operations may be performed. However, the XM Receiver and SIRIUS Receiver cannot be connected at the same time.

SIRIUS Receiver: Verify the features of the connected SIRIUS Receiver Box. Not all SIRIUS Receivers have identical functions and some may not be performed on this unit. For details about individual functions, refer to the SIRIUS Receiver's Owner's Manual.

Receiving Channels with the SAT Radio Receiver (Optional)

About SAT Radio

Satellite Radio* is the next generation of audio entertainment, with over 100 digital audio channels. For a small monthly fee, subscribers can hear crystal-clear music, sports, news and talk, coast-to-coast via satellite. For more information, visit XM's website at www.xmradio.com, or SIRIUS' website at www.sirius.com.

To receive SAT Radio, the separately sold XM Direct™ or SIRIUS Satellite Radio Tuner and an appropriate Ai-NET Interface Adapter will be required. For details, consult you nearest Alpine dealer.

* *XM and its corresponding logos are trademarks of XM Satellite Radio Inc.*
* *SIRIUS and its corresponding logos are trademarks of SIRIUS Satellite Radio Inc.*

* *The SAT Receiver controls on this unit are operative only when a SAT Receiver is connected.*

1 **Press ⏻ SOURCE to activate the SAT Radio mode.**

2 **Press BAND to select one of the three SAT Radio Preset Bands.**

Each press changes the band:

XM mode:
XM1 → XM2 → XM3 → XM1

SIRIUS mode:
SR1 → SR2 → SR3 → SR1

3 **Press ◄◄ or ►►| to select the desired channel.**
Holding down ◄◄ or ►►| will change channels continuously.

* *When using the optional remote control (RUE-4190, etc.), an SAT Radio Channel can be directly called up with the numeric keypad of the remote control.*

  1 *While in XM or SIRIUS Radio mode, enter the Channel number you want to call up with the numeric keypad on the remote control.*

  2 *Press ENTER on the remote control within 5 seconds to receive the channel.*
  If the channel number is input without pressing ENTER, the channel is automatically received after 5 seconds.

Checking the SAT Radio ID Number

A unique Radio ID number is required to subscribe to SAT Radio programming. Each third party XM or SIRIUS radio comes with this number.

This number is an 8 character (for XM Radio) or 12 character (for SIRIUS Radio) alphanumeric number. It is printed on a label found on the SAT Receiver.
It can also be displayed on the screen of this unit in the following way.

XM:

1 **While receiving a XM Radio band, press ◄◄ or ►►| to select channel "0" for XM.**

2 **To cancel the ID number display, select the channel other than "0".**

SIRIUS:

1 **While receiving a SIRIUS Radio band, press ◄◄ or ►►| to select channel "255" or "0" for SIRIUS.**

2 **To cancel the ID number display, set the channel to other than "255" and "0".**

* *You cannot use "O," "S," "I," or "F" for the ID Number (XM radio Receiver only).*
* *You can check the ID number printed on a label on your third party, SAT Radio Receiver package.*
* *All invalid channels (and unsubscribed channels, if applicable) will automatically be skipped when navigating channels via the UP/ DOWN channel keys.*

Storing Channel Presets

1 Press **BAND** to select the desired band you want to store.

2 Press **PRESET**.
The Preset screen is displayed.

3 Turn the **Double Action encoder** to select the preset number.

4 Press and hold 🔍**/ENTER** for at least 2 seconds.
The selected station is stored.

5 Repeat the procedure to store up to 5 other channels onto the same band.

- *To use this procedure for other bands, simply select the band desired and repeat the procedure.*
- *A total of 18 channels can be stored in the preset memory for either XM or SIRIUS. 6 Channels are stored in each band (XM1, XM2 and XM3 for XM; SIRIUS1, SIRIUS2 and SIRIUS3 for SIRIUS).*
- *If you store a channel in a preset memory which already has a station, the current channel will be cleared and replaced with the new one.*

Receiving Stored Channels

1 Press **BAND** to select the desired band.

2 Press **PRESET**.
The Proeset screen is displayed.

3 Turn the **Double Action encoder** to select a radio station.

4 Press 🔍**/ENTER**.
The selected station is received.

Storing the desired Sports Team (SIRIUS only)

Store a favorite team from one of the available leagues SIRIUS covers. Once stored, game times and scores for that team are announced using the interruption Alert display while receiving other programming. To receive these announcements, refer to page 25.
This function becomes effective after performing the following two operations.

Storing while receiving a game broadcast

1 Select the channel broadcasting your favorite team's game.

2 Press **FUNCTION/SETUP** to activate the Function mode.

3 Turn the **Double Action encoder** to select MEMORY, then press 🔍**/ENTER** to activate the Memory mode.

4 Turn the **Double Action encoder** to select the desired team for the game being broadcast, and then press 🔍**/ENTER**.

5 Turn the **Double Action encoder** to select alert type, and then press 🔍**/ENTER**.

UPDATE (Initial setting) ↔ INITIAL

UPDATE : The Alert display interrupts by game progress (change of score, game result, etc.).
INITIAL : The Alert display interrupts when the game begins.

6 Press **FUNCTION/SETUP** to cancel the Function mode.

- *When you want to store but the memory area is full, "MEMORY FULL" is displayed. If you want to replace the team after you have performed the procedure in step 4, turn the **Double Action encoder** to select "REPLACE YES", and then press 🔍/ENTER .*
- *If no operation is performed for 10 seconds , the unit returns to normal mode.*

Game Alert Setup

1 Press and hold **FUNCTION/SETUP** for at least 2 seconds to enter the Setup mode.

2 Turn the **Double Action encoder** to select a TUNER item, and then press 🔍**/ENTER**.

3 Turn the **Double Action encoder** to select GAME ALERT and then press 🔍**/ENTER**.

4 Turn the **Double Action encoder** to select the desired league, and then press 🔍**/ENTER**.

5 Turn the **Double Action encoder** to select a team you want to store, and then press 🔍**/ENTER**.

6 Turn the **Double Action encoder** to select an alert type, and then press 🔍**/ENTER**.

UPDATE (Initial setting) ↔ INITIAL

UPDATE : The Alert display interrupts by game progress (change of score, game result, etc.).
INITIAL : The Alert display interrupts when the game begins.

7 Press and hold ⤺ for at least 2 seconds to cancel the SETUP mode.

- *Pressing ⤺ returns to the previous Setup mode.*
- *You can store a maximum of one team per league.*
- *If no operation is performed for 60 seconds, the unit will return to normal mode automatically.*

Storing the desired Song / Artist (SIRIUS only)

A stored song title or artist name is announced whenever a matching title or artist is found on another channel. The interruption Alert is displayed while listening to a program on another channel. For receiving interruption information, refer to "Recalling the stored information (SIRIUS only)" (page 26).

1 Press **FUNCTION/SETUP** to activate the Function mode when a Song or the song of an Artist you want to store is being broadcast.

2 Turn the **Double Action encoder** to select MEMORY, press ⌕/**ENTER** to activate the Memory mode.

3 Turn the **Double Action encoder** to select SONG or ARTIST, and then press ⌕/**ENTER**.

- *If no operation is performed for 10 seconds, the unit returns to normal mode.*
- *When you want to store but the memory area is full, "MEMORY FULL" is displayed. If you want to replace the Song title or Artist name after you have performed the procedure in step 3, turn the **Double Action encoder** to select "REPLACE YES", and then press ⌕/ENTER.*
- *If the Song/Artist you want to save already exists, "CAN NOT MEMORY" will be displayed.*

Recalling the stored information (SIRIUS only)

Whenever the stored sports team, song(s) or artist(s) are playing, an interruption Alert appears in the display of the unit.

1 After displaying "GAME ALERT", "SONG ALERT" or "ARTIST ALERT", an alert list will be automatically displayed.

2 Turn the **Double Action encoder** to select the desired information.

3 Press ⌕/**ENTER**.
The selected channel containing the desired information is received.

- *If no operation is performed for 10 seconds , the unit returns to normal mode.*
- *Only a single sports team, song or artist can be displayed as an interruption Alert. For example, both song and artist cannot be displayed as an Alert at the same time.*

Canceling the stored Alert Memory (SIRIUS only)

1 During usual reception, press **FUNCTION/SETUP** to turn the Function mode.

2 Turn the **Double Action encoder** to select DELETE, and press ⌕/**ENTER**.
The memory list appears. If no Alert Memory is stored, "NO MEMORY" is displayed.

3 Turn the **Double Action encoder** to select a list you want to delete, and then press ⌕/**ENTER**.

4 Turn the **Double Action encoder** to select DELETE YES, and then press ⌕/**ENTER**.

DELETE NO ↔ YES

Select "NO" the unit will return to the Memory List display.

5 Press **FUNCTION/SETUP** to cancel the Function mode.

- *If no operation is performed for 10 seconds , the unit returns to normal mode.*

Search Function

You can search for programs by Category, Channel, Artist or Song.

1 Press ⌕/**ENTER** in the XM or SIRIUS mode.

2 Turn the **Double Action encoder** to select Search mode, and then press ⌕/**ENTER**.

CATEGORY ↔ CHANNEL ↔ ARTIST* ↔ SONG*

* *SIRIUS Only.*

Category Search mode

3 Turn the **Double Action encoder** to select the desired Category, and then press ⌕/**ENTER**.

4 Turn the **Double Action encoder** to select the desired Channel Name, and then press ⌕/**ENTER**.

- *While in Category Search mode, press ⏎ to select a different search mode.*
- *The Search mode is canceled if you press and hold ⏎ for at least 2 seconds in Category Search mode.*
- *If Alert interruption occurs in the search mode, the search mode is canceled.*

Channel/Artist/Song Search mode

3 **Turn the Double Action encoder to select the desired Channel/Artist/Song Name, and then press** 🔍**/ENTER.**

- *While in Channel/Artist/Song Search mode, press ↰ to select a different search mode.*
- *The Search mode is canceled if you press and hold ↰ for at least 2 seconds in Channel/Artist/Song Search mode.*
- *Channel search is possible only in the category (last mode).*
- *If Alert interruption occurs in the search mode, the search mode is canceled.*

Quick Search Function

You can search for all channels in numerical order.

1 **Press and hold** 🔍**/ENTER for at least 2 seconds in XM or SIRIUS mode to activate Quick Search mode.**

2 **Turn the Double Action encoder to select the desired Channel within 10 seconds.**
The selected Channel is received.

Select the desired CATEGORY (Category up/down)

Press and turn the Double Action encoder to the left or right.
Turning to the right will advance to the next Category.
Turning to the left will return to the previous Category.
The first channel in the selected Category is played back.

Receiving Weather or Traffic Information from SAT Radio

1 **Select the SAT Radio Channel for your local traffic/weather information.**

2 **Press and hold ▶/❙❙ for at least 2 seconds in the SAT mode.**
The received weather or traffic channel is stored.

3 **Press and hold BAND for at least 2 seconds.**
The stored Weather or Traffic channel will be recalled.

4 **Press and hold BAND for at least 2 seconds.**
Returns to normal mode.

- *Channel other than Weather or Traffic can also be stored and recalled.*

Instant Replay Function (SIRIUS only)

In SIRIUS mode, the current channel is saved using the Instant Replay memory function. Use this function to pause the channel content at any time. When playback is continued, it will begin at the position it was paused. This function can be used to store up to 44 minutes of audio.

1 **During SIRIUS reception, press ▶/❙❙ to select the Instant Replay mode.**
"INSTANT REPLAY" is displayed, and the received station is stored.

2 **Press ▶/❙❙ again to select the play mode.**
The stored contents are played back.

SR1

184 -3'59 ——— Play Time (Remaining time for Instant Replay.)
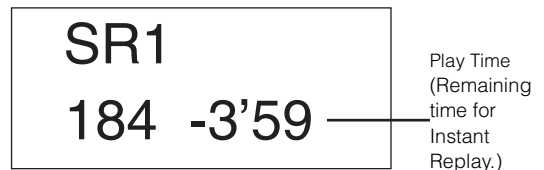
During Instant Replay playback:
Fast reverse :   Press and hold ❙◀◀ .
Fast forward :   Press and hold ▶▶❙ .

- *If you continue to press Fast forward until the end, the Instant Replay mode is canceled, and the unit will change to usual reception.*

3 **Press ↰ for at least 2 seconds to cancel the Instant Replay mode.**
The unit returns to usual SIRIUS broadcasting mode.

Changing the Display

Text information, such as the channel name, artist name/feature, and song/program title, is available with each XM or Sirius channel. The unit can display this text information as explained below.

In XM or SIRIUS mode, press VIEW.

Each time you press this button, the display changes as shown below.

XM mode:

```
┌──────────────┐     ┌──────────────┐     ┌──────────────┐ *1
│ Channel No.  │     │ Channel No.  │     │ Channel No.  │
│ Channel Name │ →   │ Category     │ →   │ Auxiliary    │
│              │     │              │     │ Data Field   │
└──────────────┘     └──────────────┘     └──────────────┘

┌──────────────┐     ┌──────────────┐     ┌──────────────┐
│ Song title   │     │ Calendar     │     │ Channel No.  │
│ Artist title │ →   │ Clock        │ →   │ Channel Name │
│              │     │              │     │              │
└──────────────┘     └──────────────┘     └──────────────┘
```

SIRIUS mode:
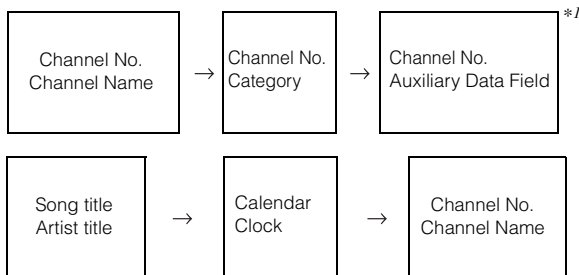
```
┌──────────────┐     ┌──────────────┐
│ Channel No.  │     │ Channel No.  │
│ Channel Name │ →   │ Category     │ →
│              │     │              │
└──────────────┘     └──────────────┘

┌──────────────┐     ┌──────────────┐
│ Song title   │     │ Song title   │
│ Artist title │ →   │ Composer name│ →
│              │     │              │
└──────────────┘     └──────────────┘

┌──────────────┐     ┌──────────────┐
│ Calendar     │     │ Channel No.  │
│ Clock        │ →   │ Channel Name │
│              │     │              │
└──────────────┘     └──────────────┘
```
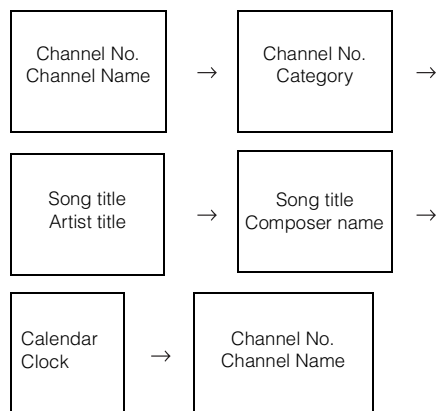
*1 *When ADF is turned OFF, this information is not displayed (see "Setting the Auxiliary Data Field Display (XM only)" on page 28.*

- *When the "Scroll Setting (TEXT SCROLL)" (page 23) is set to "AUTO", the channel name and song title scrolls continuously. When the Scroll Setting is set to "MANUAL", the song title scrolls only once.*
- *Depending on the model, the display may differ from the one shown above.*

Setting the Auxiliary Data Field Display (XM only)

The XM Auxiliary Data Field (ADF) display can be switched on or off. There is no ADF function for the SIRIUS receiver.

1 Press and hold **FUNCTION/SETUP** for at least 2 seconds to enter the Setup mode.

2 Turn the **Double Action encoder** to select the TUNER mode, and then press 🔍/**ENTER**.

3 Turn the **Double Action encoder** to select XM ADF, and then press 🔍/**ENTER**.

4 Turn the **Double Action encoder** to select ON/OFF, and then press 🔍/**ENTER**.
When setting to ON, Auxiliary Data Field is displayed by pressing VIEW (Refer to the "Changing the Display" section page 28.)

5 Press and hold ⤺ for 2 seconds to return to normal mode.

- *Pressing ⤺ during the procedure will return to the previous mode.*
- *If no operation is performed for 60 seconds, the unit will return to normal mode automatically.*

IMPRINT Operation (Optional)

Alpine introduces IMPRINT - the world's first technology that thoroughly eliminates in-car acoustic problems that normally degrade sound quality, which enables us to experience music the way the artist intended, refer to "About IMPRINT" (page 36).
When the IMPRINT audio processor (PXA-H100) (sold separately) is connected to this unit, MultEQ and the following sound adjustment can be performed.

Double Action encoder

FUNCTION/SETUP

IMPRINT 🔍**/ENTER** **PRESET**
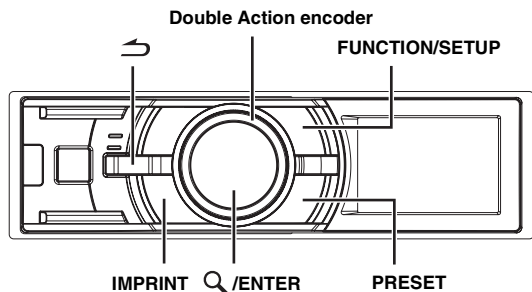
Changing MultEQ mode

MultEQ, developed by Audyssey Labs, automatically corrects the audio for the listening environment. The system is optimized for selected positions in the vehicle. To accomplish this, MultEQ must take measurements of the vehicles response characteristics. For details on the set up procedure, consult your authorized Alpine dealer.

1 Press and hold **IMPRINT** for at least 2 seconds.

2 Press 🔍**/ENTER**.

3 Turn the **Double Action encoder** to select the MultEQ mode, and then press 🔍**/ENTER**.

OFF (Manual Mode) → CURVE 1 (MultEQ-1) → CURVE 2 (MultEQ-2) → OFF (Manual Mode)

4 Press and hold **IMPRINT** for at least 2 seconds to return to normal mode.

- *The Curve mode can be selected only when curve 1 and curve 2 are stored.*
- *When using MultEQ, MX, X-OVER, Time Correction, Factory's EQ, SUBW PHASE, SUBW CHANNEL, TW Setup, EQ Mode, Filter Type, Parametric EQ and Graphic EQ are set automatically. They are no longer user adjustable.*
- *When an external audio processor is connected, the MultEQ function cannot be used.*

Adjusting Sound Setting in Manual Mode

You can change these sound settings to create your own preference when the MultEQ mode is set to MultEQ off (Manual Mode). However, subwoofer in the subwoofer system can be set to ON/OFF regardless of whether the MultEQ setting is ON or OFF.

> **Use steps 1 to 5 to select one of the Sound menu modes to modify. See the applicable section below for details about the selected item.**

1 Press and hold **FUNCTION/SETUP** for at least 2 seconds to activate the SETUP selection mode.

2 Turn the **Double Action encoder** to select AUDIO, and then press 🔍**/ENTER**.

BT*[1] ↔ AUDIO ↔ GENERAL ↔ DISPLAY ↔ IPOD ↔ TUNER*[2] ↔ BT

- *[1] Displayed only when INT MUTE is set to OFF, and the mode is set to other than BT AUDIO.*
- *[2] Only when HD / SAT receiver is connected.*

3 Turn the **Double Action encoder** to select the desired item, and then press 🔍**/ENTER**.

USER PRESET ↔ MX ↔ FR-EQ ↔ SOUND FIELD*[3] ↔ SUBW ↔ SUBW SYS*[4] ↔ SUBW PHASE*[4] ↔ SUBW CHANNEL*[4] ↔ TW*[5] ↔ EQ MODE ↔ FILTER ↔ TCR ↔ MX LEVEL *[6]
(e.g. Select SUBW)

- *[3] In step 3, three sound adjustment items (PARAMETRIC EQ/ GRAPHIC EQ, TIME CORRECTION, X-OVER) can be selected in Sound Field Adjustment mode, turn the **Double Action encoder** to select the desired item, and then press 🔍/ENTER to continue to step 4.*
- *[4] These functions are inoperable when Subwoofer is set to OFF.*
- *[5] This function can be operable only when PXA-H100 (sold separately) is connected and 2.2ch (3WAY) mode is set. For details, refer to the Owner's Manual of PXA-H100.*
- *[6] This function is inoperable when MX is set to OFF.*

4 Turn the **Double Action encoder** to change the setting, and then press 🔍**/ENTER**.

(e.g. Select SUBW ON or SUBW OFF)

5 Press and hold ⤴ for at least 2 seconds to return to normal mode.

- *Media Xpander, Factory's EQ, Parametric EQ/Graphic EQ Adjustment, EQ Mode and MX Level Adjustment are inoperable when DEFEAT is set to ON.*
- *Pressing ⤴ returns to the previous Sound menu mode.*
- *If no operation is performed for 60 seconds, Sound menu mode is canceled.*

USER PRESET

- *If IMPRINT audio processor is connected, you can make more detailed settings for the audio setting. For details, refer to "IMPRINT Operation (Optional)" (page 29).*

Storing the Audio Adjustment Level

You can store up to 3 adjusted/set contents on this unit.
All of the following adjusted/set items are stored in a preset memory.

Items to be adjusted/set	Reference page
EQ ADJ (Parametric EQ/Graphic EQ)	page 30~page 31
TCR	page 31
X-OVER	page 31

1 Turn the **Double Action encoder** to select a preset number, and press and hold ⊕/**ENTER** for at least 2 seconds.

2 Turn the **Double Action encoder** to select PROTECT YES/NO, and then press ⊕/**ENTER** to store the adjusted contents.

PROTECT YES (Initial setting) ↔ PROTECT NO

- *If YES is selected, the adjusted contents are protected and stored into the preset numbers. When you want to store the parameter into a protected preset number, "REPLACE NO/YES" can be selected.*
- *If PROTECT NO is selected, the preset is stored.*
- *While perform this operation, all adjusted contents of Parametric EQ/Graphic EQ, Time Correction and X-Over will be stored in the preset number.*
- *The stored contents are not deleted even when resetting the unit or disconnecting the battery.*

Recalling the Audio Adjustment Level

You can recall the contents stored in "Storing the Audio Adjustment Level" (page 30).

1 Turn the **Double Action encoder** to select a preset number, and press ⊕/**ENTER**.
Adjusted/set contents of the selected number are recalled.

- *The User Preset screen can also be recalled in normal mode by pressing and holding **PRESET** for at least 2 seconds.*

Turning Media Xpander ON/OFF

When the Media Xpander is on, you can adjust the Media Xpander level (refer to page 33).

OFF (Initial setting) ↔ ON

Equalizer Presets (Factory's EQ) (FR-EQ)

10 typical equalizer settings are preset at the factory for a variety of musical source material.

FLAT ↔ POPS ↔ ROCK ↔ NEWS ↔ JAZZ&BLUES ↔ ELECTRICAL DANCE ↔ HIPHOP&RAP ↔ EASY LISTENING ↔ COUNTRY ↔ CLASSICAL ↔ USER1 ↔ USER2 ↔ USER3 ↔ USER4 ↔ USER5 ↔ USER6

- *By selecting User's 1 to 6, you can recall the stored preset number in "Adjusting the Graphic Equalizer Curve" (page 31) or "Adjusting the Parametric Equalizer Curve" (page 30).*

Sound Field Adjustment

The setting of Parametric EQ/Graphic EQ Adjustment, Time Correction and X-Over can be adjusted in this mode.

Adjusting the Parametric Equalizer Curve

You can modify the Equalizer settings to create a response curve more appealing to your personal taste. To adjust the Parametric Equalizer Curve, set the EQ mode to PARAMETRIC EQ. For details, refer to "Setting EQ mode" (page 32).

1 After selecting EQ ADJ (Parametric EQ) from the Sound Field Adjustment mode, turn the **Double Action encoder** to select the band adjustment, and then press ⊕/**ENTER**.

BAND1 → BAND2 → BAND3 → BAND4 → BAND5 → BAND1

2 Turn the **Double Action encoder** to select an item to adjust, then press ⊕/**ENTER**.

FC → LV → Q → FC
(frequency) (level) (bandwidth) (frequency)

Frequency Adjustment

3-1 Turn the **Double Action encoder** to select frequency bands.
Adjustable frequency bands:
20 Hz to 20 kHz (in 1/3 octave steps)

BAND1: 20 Hz~80 Hz (63 Hz)
BAND2: 50 Hz~200 Hz (150 Hz)
BAND3: 125 Hz~3.2 kHz (400 Hz)
BAND4: 315 Hz~8 kHz (1 kHz)
BAND5: 800 Hz~20 kHz (2.5 kHz)

Level Adjustment

3-2 Turn the **Double Action encoder** to adjust the level.
Adjustable level: –6 to +6 dB

Bandwidth (Q) Adjustment

3-3 Turn the **Double Action encoder** to set the bandwidth (Q).
Adjustable bandwidth: 1, 1.5, 3

4 To adjust another band, repeat steps 1 to 3 and adjust all bands.

- *The frequencies of adjacent bands cannot be adjusted within 4 steps.*
- *While adjusting the Parametric EQ, you should consider the frequency response of the connected speakers.*
- *You can select the next band by pressing and turning the **Double Action encoder**.*
- *The User Preset screen can be recalled in the normal mode by pressing and holding **PRESET** for 2 seconds.*

Adjusting the Graphic Equalizer Curve

You can modify the equalizer settings to create a response curve more appealing to your personal taste. To adjust the graphic equalizer curve, set the EQ mode to GRAPHIC EQ. For details, refer to "Setting EQ mode" (page 32).

1 **After selecting EQ ADJ (Graphic EQ) from the Sound Field Adjustment mode, turn the Double Action encoder to select the band adjustment, and then press /ENTER.**

BAND1 → BAND2 → BAND3 → BAND4 → BAND5 → BAND6 → BAND7 → BAND1

BAND-1 (63 Hz) / BAND-2 (150 Hz) / BAND-3 (400 Hz) / BAND-4 (1 kHz) / BAND-5 (2.5 kHz) / BAND-6 (6.3 kHz) / BAND-7 (17.5 kHz)

2 **Press /ENTER to activate the level adjusting mode.**

3 **Turn the Double Action encoder to adjust the level.**
Adjustable output level: –6 to +6 dB

4 **To adjust another band, repeat steps 1 to 3, and then adjust all bands.**

- *You can select the next band by pressing and turning the Double Action encoder.*
- *The User Preset screen can be recalled in the normal mode by pressing and holding PRESET for 2 seconds.*

Adjusting the Time Correction

Before performing the following procedures, refer to "About Time Correction" (page 34).

1 **After selecting TIME CORRECTION from the Sound Field Adjustment mode, turn the Double Action encoder to select the band adjustment, and then press /ENTER.**

2.2ch (3WAY) System

F-L (Initial setting) → F-R → R-L → R-R →
(Mid-L)   (Mid-R)   (High-L)   (High-R)
SW-L → SW-R → F-L
                     (Mid-L)

4.2ch (FRONT/REAR/SUBW.) System

F-L (Initial setting) → F-R → R-L → R-R →
(Front-L)   (Front-R)   (Rear-L)   (Rear-R)
SW-L → SW-R → F-L
                     (Front-L)

2 **Press /ENTER to activate the Time Correction input mode.**

3 **Turn the Double Action encoder to adjust the distance (0.0 to 336.6 cm).**

L = (distance to farthest speaker) – (distance to other speakers)

Refer to "Time Correction Value List" on page 34.

4 **Repeat steps 1 to 3 to set another speaker.**
By setting these values to make its sound reach the listening position at the same time as the sound of other speakers.

- *You can select the next band by pressing and turning the Double Action encoder.*
- *The User Preset screen can be recalled in the normal mode by pressing and holding PRESET for 2 seconds.*

Adjusting the Crossover Settings (X-OVER)

Before performing the following procedures, refer to "About the Crossover" (page 35).

2.2ch (3WAY) System

1 **After selecting X-OVER from the Sound Field Adjustment mode, turn the Double Action encoder to select the band adjustment, and then press /ENTER.**

2.2ch (3WAY) System / NORMAL (L=R)
Setting items:
LOW / MID-L / MID-H / HIGH

2.2ch (3WAY) System / INDIVIDUAL (L/R)
Setting items:
LOW-L / LOW-R / MID-L-L / MID-L-R / MID-H-L / MID-H-R / HIGH-L / HIGH-R

2 **Turn the Double Action encoder to select an item to adjust, then press /ENTER.**

FC → LV → SLP → FC
(cut-off   (level)   (slope)   (frequency)
frequency)

Cut-off frequency

3-1 **Turn the Double Action encoder to select the desired cut-off frequency (Crossover Point).**
Adjustable frequency bands:

2.2ch (3WAY) System
Setting items:
LOW / MID-L	20 Hz~200 Hz
MID-H	20 Hz~20 kHz
HIGH	(1 kHz~20 kHz)*1/(20 Hz~20 kHz)*2

*1 *When MAKER'S is selected, refer to "Setting the Response Slope for the High Range Speaker (TW Setup)" (page 32).*
*2 *When USER'S is selected, refer to "Setting the Response Slope for the High Range Speaker (TW Setup)" (page 32).*

Level Adjustment

3-2 **Turn the Double Action encoder to adjust the output level.**
Adjustable output level: –12 to 0 dB.

Slope Adjustment

3-3 **Turn the Double Action encoder to adjust the slope.**
Adjustable slope: FLAT*, 6 dB/oct., 12 dB/oct., 18 dB/oct., 24 dB/oct.

* *FLAT can be set for the HIGH slope only when USER'S is selected in "Setting the Response Slope for the High Range Speaker (TW Setup)" (page 32). Depending on the response characteristics of the speaker, care should be taken when setting the response slope to FLAT, as speaker damage may result. With this unit, a message is displayed when the response slope for the high range speaker is set to FLAT.*

4 Repeat steps 1 to 3 to make adjustment to the other bands.

4.2ch (FRONT/REAR/SUBW.) System

1 After selecting X-OVER from the Sound Field Adjustment mode, turn the **Double Action encoder** to select the band adjustment, and then press 🔍**/ENTER**.

4.2ch (FRONT/REAR/SUBW.) System / NORMAL (L=R)
Setting items:
　LOW (SUB-W) / MID (REAR) / HIGH (FRONT)

4.2ch (FRONT/REAR/SUBW.) System / INDIVIDUAL (L/R)
Setting items:
　LOW (SUB-W)-L / LOW (SUB-W)-R / MID (REAR)-L / MID (REAR)-R / HIGH (FRONT)-L / HIGH (FRONT)-R

2 Turn the **Double Action encoder** to select an item to adjust, then press 🔍**/ENTER**.

FC　→　LV　→　SLP　→　FC
(cut-off　(level)　(slope)　(frequency)
　frequency)

Cut-off frequency

3-1 Turn the **Double Action encoder** to select the desired cut-off frequency (Crossover Point).
Adjustable frequency bands:

4.2ch (FRONT/REAR/SUBW.) System
Setting items:
　20 Hz~200 Hz

Level Adjustment

3-2 Turn the **Double Action encoder** to adjust the output level.
Adjustable output level: -12 to 0 dB.

Slope Adjustment

3-3 Turn the **Double Action encoder** to adjust the slope.
Adjustable slope: FLAT, 6 dB/oct., 12 dB/oct., 18 dB/oct., 24 dB/oct.

4 Repeat steps 1 to 3 to make adjustment to the other bands.

• *You can select the next band by pressing and turning the **Double Action encoder**.*
• *While adjusting the X-over, you should consider the frequency response of the connected speakers.*
• *About the 2.2ch (3WAY)/4.2ch (FRONT/REAR/SUBW.) system You can switch to 2.2ch (3WAY)/4.2ch (FRONT/REAR/SUBW.) system mode with the 2.2ch (3WAY)/4.2ch (FRONT/REAR/SUBW.) switch on the PXA-H100. For details, refer to the Owner's Manual of PXA-H100.*
• *The User Preset screen can be recalled in the normal mode by pressing and holding **PRESET** for 2 seconds.*

Turning Subwoofer ON/OFF

When the subwoofer is on, you can adjust the subwoofer output level (refer to page 18).

　OFF ↔ ON (Initial setting)

Setting the Subwoofer System

When the subwoofer is on, you can select either SYS 1 or SYS 2 for the desired subwoofer effect.

　1 (Initial setting) ↔ 2

SYS 1 :　Subwoofer level changes according to the main volume setting.
SYS 2 :　Subwoofer level change is different from the main volume setting. For example, even at low volume settings, the subwoofer is still audible.

Setting the Subwoofer Phase

　NORMAL (Initial setting) ↔ REVERSE

The subwoofer output phase is toggled SUBWOOFER NORMAL (0°) or SUBWOOFER REVERSE (180°). To adjust the level, turn the **Double Action encoder**.

Setting the Subwoofer Channel (SUBW CHANNEL)

You can set the subwoofer output to stereo or monaural. Make sure to set the correct output for your subwoofer type.

　STEREO (Initial setting) ↔ MONO

STEREO :Subwoofer stereo (L/R) output
MONO :　Subwoofer monaural output

Setting the Response Slope for the High Range Speaker (TW Setup)

Depending on the response characteristics of the speaker, care should be taken when setting the response slope of the high range speaker to FLAT in 2.2ch (3WAY) mode (see "Adjusting the Crossover Settings (X-OVER)" on page 31), as speaker damage may result.

　MAKER'S (Initial setting) ↔ USER'S

MAKER'S :As protection from possible speaker damage, FLAT cannot be set for the response slope of the high range speaker in 2.2ch (3WAY) mode.
USER'S :　The FLAT setting is possible in 2.2ch (3WAY) mode.

Setting EQ mode

This setting gives you a choice of 5-band parametric, or 7-band graphic equalizer.

　PARAMETRIC (Initial setting) ↔ GRAPHIC

Setting the Filter type

　NORMAL (Initial setting) ↔ INDIVIDUAL

NORMAL (L=R) :　Left and right speakers are adjusted equally.
INDIVIDUAL (L/R) :　Left and right speakers are individually adjusted.

Setting the Time Correction Unit (TCR Parameter)

You can change the unit, (cm or inch) of time correction.

CM (Initial setting) ↔ INCH

Setting the MX Level

MX (Media Xpander) makes vocals or instruments sound distinct regardless of the music source. The FM radio, CD, USB memory and iPhone/iPod, will be able to reproduce the music clearly even in cars with a lot of road noise.

Changing the source to which you want to apply Media Xpander.

FM (MX level 1 to 3):
> The medium to high frequencies become clearer, and produces well balanced sound at all frequencies.

CD (MX level 1 to 3):
> CD mode processes a large amount of data during playback. MX takes advantage of this large data quantity to reproduce a more clear, clean output.

CMPM/SAT (MX level 1 to 3):
> This corrects information that was lost at the time of compression. This reproduces a well-balanced sound close to the original.

DVD (MX level 1 to 3):
> A DVD or Video CD contains a large quantity of data such as music clip. MX uses this data to reproduce the sound accurately.

AUX (MX level 1):
> Choose the MX mode (CMPM, MOVIE, or MUSIC) that corresponds to the media connected.

- *The initial setting of MX is different depending on the source.*
- *Each music source, such as FM radio, CD, and MP3/WMA/AAC can have its own MX setting.*
- *On discs with both MP3/WMA/AAC and CD-DA, when the source changes from "MP3/WMA/AAC to CD-DA" or "CD-DA to MP3/WMA/AAC", MX-mode switching may delay playback slightly.*
- *Setting to Non Effect sets MX mode of each music source to OFF.*
- *This function is inoperable when DEFEAT is set to ON.*
- *There is no MX mode for AM radio.*
- *If an audio processor with the MX function (PXA-H701, etc.) is connected, its own MX processing is applied to the music source. Since the processor MX settings may not match the head unit, the audio processor needs to be adjusted. For details, refer to the Owner's Manual of the audio processor.*
- *"CMPM" is applied for MP3/WMA/AAC and iPhone/iPod.*
- *"SAT" is applied for XM radio and SIRIUS radio.*

About Time Correction

The distance between the listener and the speakers in a car vary widely due to the complex speaker placement. This difference in the distances from the speakers to the listener creates a shift in the sounds image and frequency characteristics. This is caused by the time delay between the sound reaching the listener's right versus the left ear.

To correct this, this unit is able to delay the audio signal to the speakers closest to the listener. This effectively creates a perception of increased distance for those speakers. The listener can be placed at an equal distance between the left and right speakers for optimum staging. The adjustment will be made for each speaker in 3.4cm steps.

Example 1. Listening Position: Front Left Seat

Adjust the time correction level of the front left speaker to a high value and the rear right to zero or a low value.
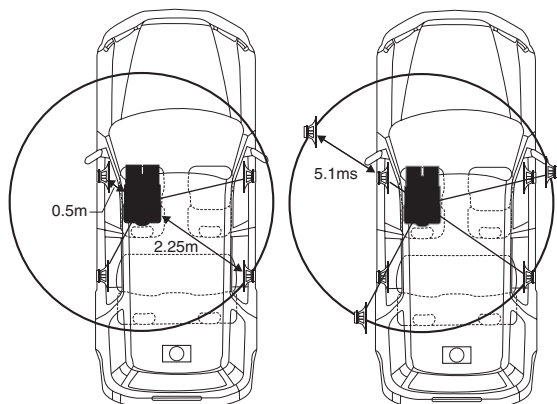
The sound is not balanced because the distance between the listening position and the various speakers is different.
The difference in distance between the front left speaker and the rear right speaker is 1.75 m (68-7/8").
Here we calculate the time correction value for the front left speaker in the diagram on the above.

Conditions:
Farthest Speaker – listening position : 2.25 m (88-9/16")
Front left speaker – listening position : 0.5 m (19-11/16")
Calculation: L = 2.25 m – 0.5 m = 1.75 m (68-7/8")
Time correction = 1.75 ÷ 343*[1] × 1,000 = 5.1 (ms)

*[1] Speed of sound: 343 m/s (765 mph) at 20°C

In other words, giving the front left speaker a time correction value of 5.1 ms makes it seem as if its distance from the listener is the same as the distance to the farthest speaker.

Time correction eliminates the differences in the time required for the sound to reach the listening position.
The time of the front left speaker is corrected by 5.1 ms so that its sound reaches the listening position at the same time as the sound of other speakers.

Example 2. Listening Position: All Seats

Adjust the time correction level of each speaker to almost the same level.

1 **Sit in the listening position (driver's seat, etc.) and measure the distance (in meters) between your head and the various speakers.**

2 **Calculate the difference between the distance correction value to the farthest speaker and the other speakers.**

L = (distance to farthest speaker) – (distance to other speakers)

These values are the time correction values for the different speakers. Setting these values to make each sound reach the listening position at the same time as the sound of other speakers.

Time Correction Value List

| Delay Number	Time Difference (ms)	Distance (cm)	Distance (inch)	Delay Number	Time Difference (ms)	Distance (cm)	Distance (inch)
0	0.0	0.0	0.0	51	5.1	173.4	68.3
1	0.1	3.4	1.3	52	5.2	176.8	69.7
2	0.2	6.8	2.7	53	5.3	180.2	71.0
3	0.3	10.2	4.0	54	5.4	183.6	72.4
4	0.4	13.6	5.4	55	5.5	187.0	73.7
5	0.5	17.0	6.7	56	5.6	190.4	75.0
6	0.6	20.4	8.0	57	5.7	193.8	76.4
7	0.7	23.8	9.4	58	5.8	197.2	77.7
8	0.8	27.2	10.7	59	5.9	200.6	79.1
9	0.9	30.6	12.1	60	6.0	204.0	80.4
10	1.0	34.0	13.4	61	6.1	207.4	81.7
11	1.1	37.4	14.7	62	6.2	210.8	83.1
12	1.2	40.8	16.1	63	6.3	214.2	84.4
13	1.3	44.2	17.4	64	6.4	217.6	85.8
14	1.4	47.6	18.8	65	6.5	221.0	87.1
15	1.5	51.0	20.1	66	6.6	224.4	88.4
16	1.6	54.4	21.4	67	6.7	227.8	89.8
17	1.7	57.8	22.8	68	6.8	231.2	91.1
18	1.8	61.2	24.1	69	6.9	234.6	92.5
19	1.9	64.6	25.5	70	7.0	238.0	93.8
20	2.0	68.0	26.8	71	7.1	241.4	95.1
21	2.1	71.4	28.1	72	7.2	244.8	96.5
22	2.2	74.8	29.5	73	7.3	248.2	97.8
23	2.3	78.2	30.8	74	7.4	251.6	99.2
24	2.4	81.6	32.2	75	7.5	255.0	100.5
25	2.5	85.0	33.5	76	7.6	258.4	101.8
26	2.6	88.4	34.8	77	7.7	261.8	103.2
27	2.7	91.8	36.2	78	7.8	265.2	104.5
28	2.8	95.2	37.5	79	7.9	268.6	105.9
29	2.9	98.6	38.9	80	8.0	272.0	107.2
30	3.0	102.0	40.2	81	8.1	275.4	108.5
31	3.1	105.4	41.5	82	8.2	278.8	109.9
32	3.2	108.8	42.9	83	8.3	282.2	111.2
33	3.3	112.2	44.2	84	8.4	285.6	112.6
34	3.4	115.6	45.6	85	8.5	289.0	113.9
35	3.5	119.0	46.9	86	8.6	292.4	115.2
36	3.6	122.4	48.2	87	8.7	295.8	116.6
37	3.7	125.8	49.6	88	8.8	299.2	117.9
38	3.8	129.2	50.9	89	8.9	302.6	119.3
39	3.9	132.6	52.3	90	9.0	306.0	120.6
40	4.0	136.0	53.6	91	9.1	309.4	121.9
41	4.1	139.4	54.9	92	9.2	312.8	123.3
42	4.2	142.8	56.3	93	9.3	316.2	124.6
43	4.3	146.2	57.6	94	9.4	319.6	126.0
44	4.4	149.6	59.0	95	9.5	323.0	127.3
45	4.5	153.0	60.3	96	9.6	326.4	128.6
46	4.6	156.4	61.6	97	9.7	329.8	130.0
47	4.7	159.8	63.0	98	9.8	333.2	131.3
48	4.8	163.2	64.3	99	9.9	336.6	132.7
49	4.9	166.6	65.7				
50	5.0	170.0	67.0				

About the Crossover

Crossover (X-OVER):

This unit is equipped with an active crossover. The crossover limits the frequencies delivered to the outputs. Each channel is controlled independently. Thus, each speaker pair can be driven by the frequencies for which they have been optimally designed.

The crossover adjusts the HPF (high pass filter) or LPF (low pass filter) of each band, and also the slope (how fast the filter rolls off the highs or lows).

Adjustments should be made according to the reproduction characteristics of the speakers. Depending on the speakers, a passive network may not be necessary. If you are unsure about this point, please consult your authorized Alpine dealer.

4.2ch (FRONT/REAR/SUBW.) mode

|	Cut-off frequency (1/3 octave steps)		Slope		Level
	HPF	LPF	HPF	LPF	
Low range speaker	----	20 Hz - 200 Hz	----	FLAT, 6, 12, 18, 24 dB/oct.	0 to −12 dB
Rear high range speaker	20 Hz - 200 Hz	----	FLAT, 6, 12, 18, 24 dB/oct.	----	0 to −12 dB
Front high range speaker	20 Hz - 200 Hz	----	FLAT, 6, 12, 18, 24 dB/oct.	----	0 to −12 dB
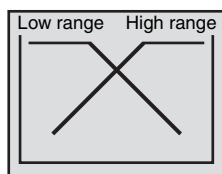
(Different from actual display)

2.2ch (3WAY) mode

	Cut-off frequency (1/3 octave steps)		Slope		Level
	HPF	LPF	HPF	LPF	
Low range speaker	----	20 Hz - 200 Hz	----	FLAT, 6, 12, 18, 24 dB/oct.	0 to −12 dB
Mid range speaker	20 Hz - 200 Hz	20 Hz - 20 kHz	FLAT, 6, 12, 18, 24 dB/oct.	FLAT, 6, 12, 18, 24 dB/oct.	0 to −12 dB
High range speaker	1 kHz - 20 kHz, (20 Hz ~ 20 kHz)*	----	FLAT* 6, 12, 18, 24 dB/oct.	----	0 to −12 dB

* Only when selecting USER'S in "Setting the Response Slope for the High Range Speaker (TW Setup)" (page 32).

(Different from actual display)
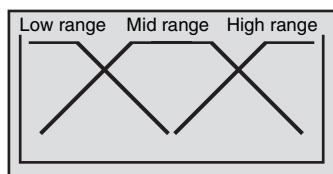
(Different from actual display)
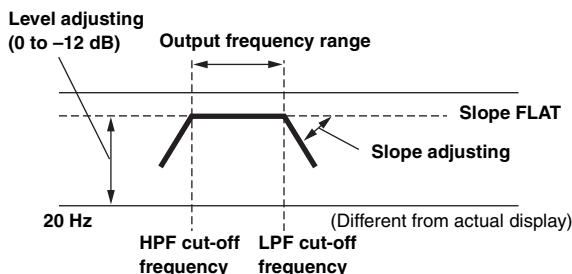
- *HPF (high pass filter): Cuts the lower frequencies and allows the higher frequencies to pass.*
- *LPF (low pass filter): Cuts the higher frequencies and allows the lower frequencies to pass.*
- *Slope: The level change (in dB) for a frequency change of one octave.*
- *The higher the slope value, the steeper the slope becomes.*
- *Adjust the slope to FLAT to bypass the HP or LP filters.*
- *Do not use a tweeter without the HPF on or set to a low frequency, as it may cause damage to the speaker due to the low frequency content.*
- *You cannot adjust the crossover frequency higher than the HPF or lower than the LPF.*
- *Adjustment should be made according to the recommended crossover frequency of the connected speakers. Determine the recommended crossover frequency of the speakers. Adjusting to a frequency range outside that recommended may cause damage to the speakers. For the recommended crossover frequencies of Alpine speakers, refer to the respective Owner's Manual.*
  We are not responsible for damage or malfunction of speakers caused by using the crossover outside the recommended value.

About IMPRINT

VISION VS. REALITY

All good music starts as an artist's vision. After countless hours of rehearsing, recording and mixing, that vision is ready for us to hear on discs, radio and other media. But do we hear it as the artist created it? Unfortunately, the reality is that we are almost never able to listen to it in the exact way the artist intended. Especially when we are listening in a car.

CARS ARE TERRIBLE LISTENING SPACES

Car interiors are full of materials that obstruct and degrade sound quality. For example, windows amplify and reflect high frequencies. Seat and dashboard coverings change certain frequencies. Carpets absorb and suppress mid frequencies. Graphic and parametric EQs are only partial remedies for these problems. In addition, the speakers are not located at equal distances from listeners, creating an unbalanced, uncentred sound stage. Time correction can help fix this, but only for one listening position.
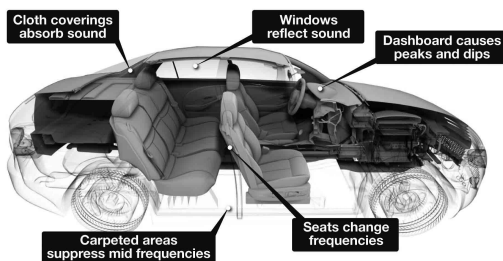
INTRODUCING IMPRINT

These acoustical problems are so severe that no correction system has been able to overcome them. Until now, with the introduction of IMPRINT, Alpine provides a hardware/software combination that not only solves these problems, it actually improves the sound stage, tonal balance and definition - and does it automatically, in a matter of minutes!
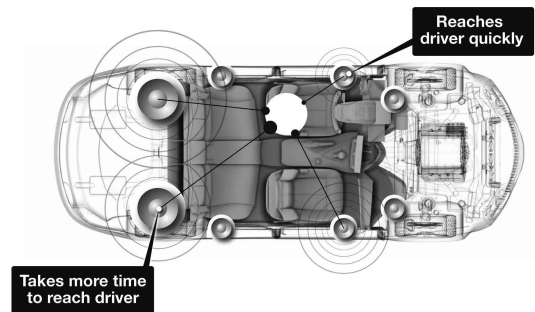
HOW IMPRINT IS DIFFERENT

IMPRINT using MultEQ is superior to other equalisation systems in five ways.

- It is the only system that measures the entire listening area, capturing time domain information from each listening location and applying a proprietary method for processing it to represent all seat locations. This gives the people in each seat the optimal listening experience.
- It corrects both time and frequency problems, for an improved soundstage and smoother, more natural sound.
- It uses dynamic frequency allocation to apply hundreds of points of correction to those areas where the sound problems are greatest.
- It determines optimized blending points for low frequency crossovers.
- It provides, in minutes, vehicle sound tuning that generally takes skilled professionals days to accomplish.

Information

In Case of Difficulty

If you encounter a problem, please turn the power off, then on again. If the unit is still not functioning normally, please review the items in the following checklist. This guide will help you isolate the problem if the unit is at fault. Otherwise, make sure the rest of your system is properly connected or consult your authorized Alpine dealer.

Basic

No function or display.
- Vehicle's ignition is off.
  - If connected following instructions, the unit will not operate with the vehicle's ignition off.
- Improper power lead (Red) and battery lead (Yellow) connections.
  - Check power lead and battery lead connections.
- Blown fuse.
  - Check the fuse of the unit; replace with the proper value if necessary.
- Internal micro-computer malfunctioned due to interference noise etc.
  - Press the RESET switch with a ball-point pen or other pointed article.

Radio

Unable to receive stations.
- No antenna or open connection in cable.
  - Make sure the antenna is properly connected; replace the antenna or cable if necessary.

Unable to tune stations in the seek mode.
- You are in a weak signal area.
  - Make sure the tuner is in the DX mode.
- If the area you are in is a primary signal area, the antenna may not be grounded and connected properly.
  - Check your antenna connections; make sure the antenna is properly grounded at its mounting location.
- The antenna may not be the proper length.
  - Make sure the antenna is fully extended; if broken, replace the antenna with a new one.

Broadcast is noisy.
- The antenna is not the proper length.
  - Extend the antenna fully; replace it if it is broken.
- The antenna is poorly grounded.
  - Make sure the antenna is grounded properly at its mounting location.

MP3/WMA/AAC

MP3, WMA or AAC is not played back.
- Writing error occurred. The MP3/WMA/AAC format is not compatible.
  - Make sure the MP3/WMA/AAC has been written in a supported format. Refer to "About MP3/WMA/AAC" (page 17), then rewrite in the format supported by this device.

Audio

The sound is not output from the speakers.
- Unit has no output signal of the internal amplifier.
  - POWER IC is switched to "ON" (page 22).

iPod

iPod does not play and no sound is output.
- The iPod has not been recognized.
  - Reset this unit and the iPod. Refer to "Initial System Start-Up" (page 6). To reset the iPod, refer to the Owner's Manual of the iPod.

Indication for iPod Mode

```
CURRENT
  ERROR
```

- Abnormal current is being drawn by the device connected to USB. An error message may be displayed if the device connected is not compatible or defective.
  - Attempt to connect another iPhone/iPod.

```
DEVICE
 ERROR
```

- An iPod that is not supported by the unit is connected.
  - Connect an iPod that is supported by the unit.

```
NO USB
 DEVICE
```

- An iPhone/iPod is not connected.
  - Make sure the iPhone/iPod is correctly connected and the cable is not excessively bent.

```
NO SONG
```

- There are no songs in the iPhone/iPod.
  - Download songs to the iPhone/iPod and connect to this unit.

```
NO SUPPORT
```

- Text information that is no supported on the unit has been input.
  - Use an iPhone/iPod in which text information is input that is supported on the unit.

```
ERROR-01
```

- Communication error
  - Turn the ignition key off, and then set to ON again.
  - Reset the iPod.
  - Verify in the display after reconnecting the iPhone/iPod to the Interface cable for iPod and to the USB cable.

```
ERROR-02
```

- Caused by the iPhone/iPod Software Version not being compatible with this unit.
  - Update the iPhone/iPod Software Version to be compatible with this unit.

ERROR-03

- The iPhone/iPod is not verified.
  - Change another iPhone/iPod.

Indication for USB memory

CURRENT ERROR

- Abnormal current is being drawn by the device connected to USB. An error message may be displayed if the device connected is not compatible. The USB Flash Memory device may be defective.
  - Attempt to connect another USB memory.

DEVICE ERROR

- A USB device that is not supported by the unit is connected.
  - Connect a USB device that is supported by the unit.

NO USB DEVICE

- A USB memory is not connected.
  - Make sure the USB memory device is correctly connected and the cable is not excessively bent.

NO SONG

- No song (file) is stored in the USB memory.
  - Connect the USB memory device after storing songs (files).

UNSUPORT

- A sampling rate/bit rate not supported by the unit is used.
  - Use a sampling rate/bit rate that is supported by the unit.

PROTECT

- A copy-protected WMA file was played back.
  - You can only play back non-copy-protected files.

NO SUPPORT

- Text information that is not recognizable by the unit has been input.
  - Use a USB memory device with input text information that is supported by the unit.

Indication for Portable audio player Mode

CURRENT ERROR

- Abnormal current is being drawn by the device connected to USB. An error message may be displayed if the device connected is not compatible. The USB Flash Memory device may be defective.
  - Attempt to connect another Portable audio player.

DEVICE ERROR

- A Portable audio player that is not supported by the unit is connected.
  - Attempt to connect another Portable audio player.

NO USB DEVICE

- A Portable audio player is not connected.
  - Make sure the Portable audio player is correctly connected and the cable is not excessively bent.

NO SONG

- There are no songs in the Portable audio player.
  - Download songs to the Portable audio player and connect to this unit.

NO SUPPORT

- Text information that is no supported on the unit has been input.
  - Use a Portable audio player in which text information is input that is supported on the unit.

ERROR-01

- Communication error
  - Turn the ignition key off, and then set to ON again.
  - Verify in the display after reconnecting the Portable audio player to the connection cable.

ERROR-02

- Caused by the Software Version not being compatible with this unit.
  - Update the Portable audio player Software Version.

ERROR-03

- The Portable audio player is not verified.
  - Change another Portable audio player.

Indication for CD Changer

HI-TEMP

- Protective circuit is activated due to high temperature.
  - The indication will disappear when the temperature returns to normal operating range.

ERROR-01

- Malfunction in the CD Changer.
  - Consult your Alpine dealer. Press the magazine eject button and pull out the magazine.
    Check the indication. Insert the magazine again.
    If the magazine cannot be pulled out, consult your Alpine dealer.
- Magazine ejection not possible.
  - Press the magazine eject button. If the magazine does not eject, consult your Alpine dealer.

ERROR-02

- A disc is left inside the CD Changer.
  - Press the eject button to activate the eject function. When the CD Changer finishes the eject function, insert an empty CD magazine into the CD Changer to receive the disc left inside the CD Changer.

NO MAGAZINE

- No magazine is loaded into the CD Changer.
  - Insert a magazine.

NO DISC

- No indicated disc.
  - Choose another disc.

Indication for SAT Receiver Mode

ANTENNA

- The XM or SIRIUS antenna is not connected to the XM or SIRIUS radio module.
  - Check whether the XM or SIRIUS antenna cable is attached securely to the XM or SIRIUS radio module.

UPDATING

- Radio is being updated with latest encryption code.
  - Wait until encryption code is being updated. Channels 0 and 1 should function normally.

NO SIGNL (XM mode)

ACQUIRING SIGNAL (SIRIUS mode)

- XM or SIRIUS signal is too weak at the current location.
  - Wait until the car reaches a location with a stronger signal.

LOADING

- Radio is acquiring audio or program information.
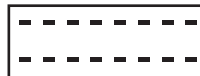 - Wait until the radio has received the information.

OFF AIR (XM mode)

ACQUIRING SIGNAL (SIRIUS mode)

- The channel currently selected has stopped broadcasting.
  - Select another channel.

- - - - - - - -

- The user has selected a channel number that does not exist or is not subscribed to.
  - The unit will revert back to the previously selected channel.
- There is no artist name/feature, song/program title, or additional information associated with the channel at that time.
  - No action needed.

ERROR

- If an error or other problem occurs.
  - Change channels or consult your Alpine dealer.

Specifications

FM TUNER SECTION

Tuning Range	87.7-107.9 MHz
Mono Usable Sensitivity	9.3 dBf (0.8μV/75 ohms)
50 dB Quieting Sensitivity	13.5 dBf (1.3μV/73 ohms)
Alternate Channel Selectivity	80 dB
Signal-to-Noise Ratio	65 dB
Stereo Separation	35 dB
Capture Ratio	2.0 dB

AM TUNER SECTION

Tuning Range	530-1,710 kHz
Sensitivity (IEC Standard)	22.5 μV/27 dB

USB SECTION

USB requirements	USB 1.1/2.0
Max. Power Consumption	500mA
USB Class	Mass Storage
File System	FAT 12/16/32
MP3 Decoding	MPEG-1/2 AUDIO Layer-3
WMA Decoding	Windows Media™ Audio
AAC Decoding	AAC-LC format ".m4a" file
Number of Channels	2-Channel (Stereo)
Frequency Response*	5-20,000 Hz (±1 dB)
Total Harmonic Distortion	0.008% (at 1 kHz)
Dynamic Range	95 dB (at 1 kHz)
Signal-to-Noise Ratio	>105 dB
Channel Separation	85 dB (at 1 kHz)

* Frequency response may differ depending on the encoder software/bit rate.

GENERAL

Power Requirement	14.4 V DC (11-16 V allowable)
Power Output	16 W RMS × 4*

*Primary amplifier ratings per CEA-2006 Standard

- Power output: measured at 4 Ohms and ≤ 1% THD+N
- S/N: 80 dBA (reference: 1 W into 4 Ohms)

Maximum Pre-Output Voltage	2 V/10 k ohms
Bass	±14 dB at 100 Hz
Treble	±14 dB at 10 kHz
Weight	1.0 kg (2 lbs. 3 oz)

CHASSIS SIZE

Width	178 mm (7")
Height	50 mm (2")
Depth	156 mm (6-1/8")

NOSEPIECE SIZE

Width	170 mm (6-3/4")
Height	46 mm (1-13/16")
Depth	28 mm (1-1/8")

- *Due to continuous product improvement, specifications and design are subject to change without notice.*

Installation and Connections

Before installing or connecting the unit, please read the following and pages 3 and 4 of this manual thoroughly for proper use.

⚠ Warning

MAKE THE CORRECT CONNECTIONS.

Failure to make the proper connections may result in fire or product damage.

USE ONLY IN CARS WITH A 12 VOLT NEGATIVE GROUND.

(Check with your dealer if you are not sure.) Failure to do so may result in fire, etc.

BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL.

Failure to do so may result in electric shock or injury due to electrical shorts.

DO NOT SPLICE INTO ELECTRICAL CABLES.

Never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock.

DO NOT DAMAGE PIPE OR WIRING WHEN DRILLING HOLES.

When drilling holes in the chassis for installation, take precautions so as not to contact, damage or obstruct pipes, fuel lines, tanks or electrical wiring. Failure to take such precautions may result in fire.

DO NOT USE BOLTS OR NUTS IN THE BRAKE OR STEERING SYSTEMS TO MAKE GROUND CONNECTIONS.

Bolts or nuts used for the brake or steering systems (or any other safety-related system), or tanks should NEVER be used for installations or ground connections. Using such parts could disable control of the vehicle and cause fire etc.

KEEP SMALL OBJECTS SUCH AS BOLTS OR SCREWS OUT OF THE REACH OF CHILDREN.

Swallowing them may result in serious injury. If swallowed, consult a physician immediately.

DO NOT INSTALL IN LOCATIONS WHICH MIGHT HINDER VEHICLE OPERATION, SUCH AS THE STEERING WHEEL OR GEARSHIFT.

Doing so may obstruct forward vision or hamper movement etc. and results in serious accident.

DO NOT ALLOW CABLES TO BECOME ENTANGLED IN SURROUNDING OBJECTS.

Arrange wiring and cables in compliance with the manual to prevent obstructions when driving. Cables or wiring that obstruct or hang up on places such as the steering wheel, gear lever, brake pedals, etc. can be extremely hazardous.

⚠ Caution

HAVE THE WIRING AND INSTALLATION DONE BY EXPERTS.

The wiring and installation of this unit requires special technical skill and experience. To ensure safety, always contact the dealer where you purchased this product to have the work done.

USE SPECIFIED ACCESSORY PARTS AND INSTALL THEM SECURELY.

Be sure to use only the specified accessory parts. Use of other than designated parts may damage this unit internally or may not securely install the unit in place. This may cause parts to become loose resulting in hazards or product failure.

ARRANGE THE WIRING SO IT IS NOT CRIMPED OR PINCHED BY A SHARP METAL EDGE.

Route the cables and wiring away from moving parts (like the seat rails) or sharp or pointed edges. This will prevent crimping and damage to the wiring. If wiring passes through a hole in metal, use a rubber grommet to prevent the wire's insulation from being cut by the metal edge of the hole.

DO NOT INSTALL IN LOCATIONS WITH HIGH MOISTURE OR DUST.

Avoid installing the unit in locations with high incidence of moisture or dust. Moisture or dust that penetrates into this unit may result in product failure.

Precautions

- Be sure to disconnect the cable from the (–) battery post before installing your iDA-X303. This will reduce any chance of damage to the unit in case of a short-circuit.
- Be sure to connect the color coded leads according to the diagram. Incorrect connections may cause the unit to malfunction or damage to the vehicle's electrical system.
- When making connections to the vehicle's electrical system, be aware of the factory installed components (e.g. on-board computer). Do not tap into these leads to provide power for this unit. When connecting the iDA-X303 to the fuse box, make sure the fuse for the intended circuit of the iDA-X303 has the appropriate amperage. Failure to do so may result in damage to the unit and/or the vehicle. When in doubt, consult your Alpine dealer.
- The iDA-X303 uses female RCA-type jacks for connection to other units (e.g. amplifier) having RCA connectors. You may need an adaptor to connect other units. If so, please contact your authorized Alpine dealer for assistance.
- Be sure to connect the speaker (–) leads to the speaker (–) terminal. Never connect left and right channel speaker cables to each other or to the vehicle body.

IMPORTANT

Please record the serial number of your unit in the space provided below and keep it as a permanent record. The serial number or the engraved serial number is located on the bottom of the unit.
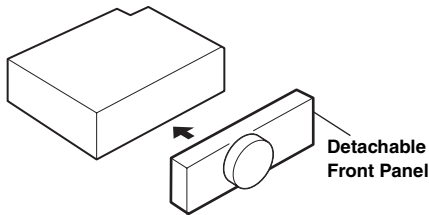
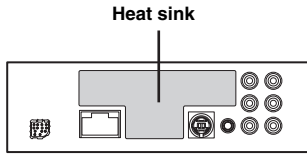SERIAL NUMBER: _____

INSTALLATION DATE: _____

INSTALLATION TECHNICIAN: _____

PLACE OF PURCHASE: _____

Installation

Caution

Do not block the unit's heat sink, thus preventing air circulation. If blocked, heat will accumulate inside the unit and may cause a fire.

Heat sink

Caution

When you install this unit in your car, do not remove the detachable front panel.
If the detachable front panel is removed during installation, you might press too hard and warp the metal plate that holds it in place.

Detachable Front Panel

• *The main unit must be mounted within 35 degrees of the horizontal plane, back to front.*

Less than 35°

1

Mounting Sleeve (Included)
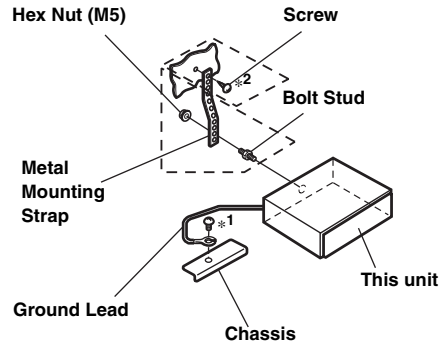
Dashboard

Pressure Plates*

This unit
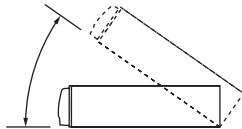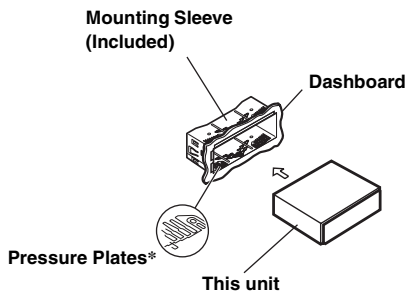
* *If the installed mounting sleeve is loose in the dashboard, the pressure plates may be bent slightly to remedy the problem.*

Remove mounting sleeve from the main unit (see "Removal" on page 42).

2

Hex Nut (M5)   **Screw**

Bolt Stud

Metal Mounting Strap

*2

*1

Ground Lead

This unit

Chassis

Reinforce the head unit with the metal mounting strap (not supplied). Secure the ground lead of the unit to a clean metal spot using a screw (*1) already attached to the vehicle's chassis.

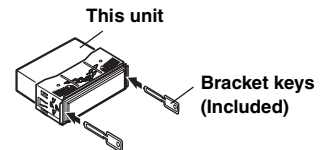• *For the screw marked "*2", use an appropriate screw for the chosen mounting location.*

Connect each input lead coming from an amplifier or equalizer to the corresponding output lead coming from the left rear of the iDA-X303. Connect all other leads of the iDA-X303 according to details described in the CONNECTIONS section.

3
Slide the iDA-X303 into the dashboard until it clicks. This ensures that the unit is properly locked and will not accidentally come out from the dashboard. Install the detachable front panel.
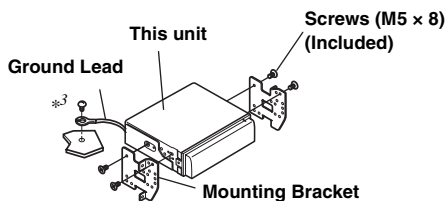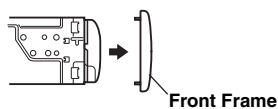
Removal

1. Remove the detachable front panel.

2. Insert the bracket keys into the unit, along the guides on either side. The unit can now be removed from the mounting sleeve.

This unit

Bracket keys (Included)

3. Pull the unit out, keeping it unlocked as you do so.

<JAPANESE CAR>

Front Frame

- -

This unit

Screws (M5 × 8) (Included)

Ground Lead
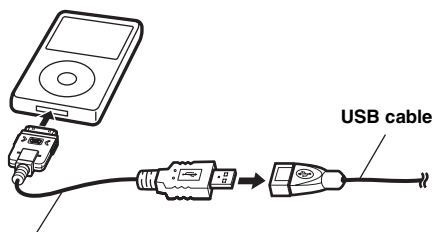
∗³

Mounting Bracket

• *Secure the ground lead of the unit to a clean metal spot using a screw (∗³) already attached to the vehicle's chassis.*

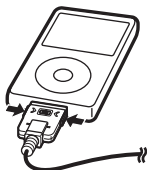### iPhone/iPod Connection (sold separately)

Connect USB cable to an iPhone/iPod with Interface cable for iPod.

USB cable

Interface cable for iPod (supplied)

Remove the iPhone/iPod

Remove the iPhone/iPod from Interface cable for iPod.

• *Remove the iPhone/iPod after the unit has been changed to a source other than the iPhone/iPod. If the iPhone/iPod is removed while playing, data may be lost.*
• *If sound is not output or the iPhone/iPod is not recognized even when the iPhone/iPod is connected, remove the iPhone/iPod once, then connect it again, or reset the iPod.*
• *Do not leave the iPhone/iPod in a vehicle for a long time. Heat and humidity may damage the iPhone/iPod and you may not be able to play it again.*
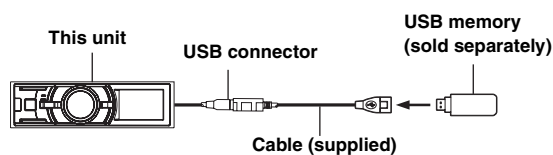
USB memory Connection (sold separately)

Connect USB memory

1. Connect the USB cable to the USB connector of the unit, and then secure the connection using the lock case supplied with USB cable as shown below.

This unit

lock case

USB memory (sold separately)
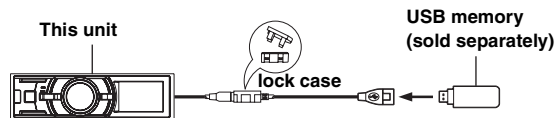
2. Connect USB memory to USB cable.

This unit

USB connector

USB memory (sold separately)

Cable (supplied)

Remove USB memory

Pull out USB memory squarely from the USB cable.

This unit

USB connector

USB memory (sold separately)

Cable (supplied)
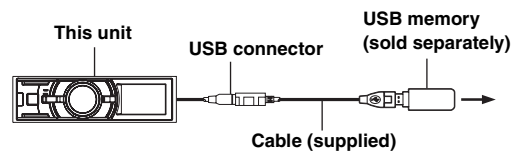
• *When removing USB memory, pull it out straight.*
• *If sound is not output or USB memory is not recognized even when USB memory is connected, remove USB memory once, then connect it again.*
• *Change to a source other than the USB memory mode, then remove the USB memory. If the USB memory is removed in the USB memory mode, data may be damaged.*
• *Route the USB cable away from other cables.*

Portable Audio Player Connection (sold separately)

Connecting a Portable audio player

Connect the cable supplied with a Portable audio player to the USB cable.
Disconnect the Portable audio player.
Disconnect the cable supplied with the Portable audio player from the USB cable.

• *Refer also to the Owner's Manual of the Portable audio player.*

43-EN

Connections

Blue — POWER ANT ②
Blue/White — REMOTE TURN-ON ③
Pink/Black — AUDIO INTERRUPT IN ④
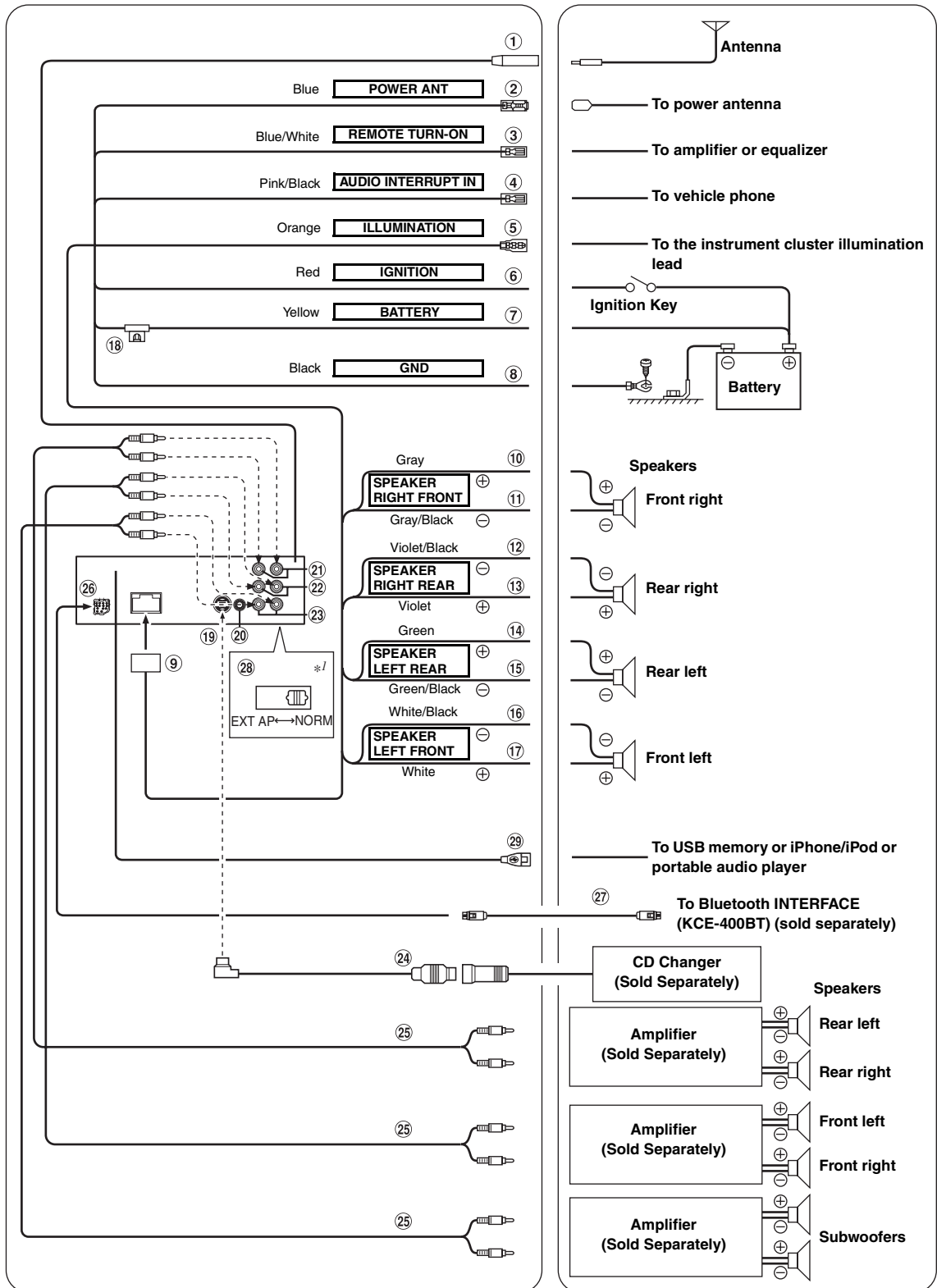Orange — ILLUMINATION ⑤
Red — IGNITION ⑥
Yellow — BATTERY ⑦
Black — GND ⑧

①

⑱

Antenna
To power antenna
To amplifier or equalizer
To vehicle phone
To the instrument cluster illumination lead
Ignition Key
Battery

Gray ⑩
SPEAKER RIGHT FRONT ⊕ ⑪
Gray/Black ⊖
Violet/Black ⑫
SPEAKER RIGHT REAR ⊖ ⑬
Violet ⊕
Green ⑭
SPEAKER LEFT REAR ⊕ ⑮
Green/Black ⊖
White/Black ⑯
SPEAKER LEFT FRONT ⊖ ⑰
White ⊕

Speakers
Front right
Rear right
Rear left
Front left

⑱ ⑳ ㉑ ㉒ ㉓ ㉖ ⑨ ⑲

㉘ *1
EXT AP ←→ NORM

㉙ To USB memory or iPhone/iPod or portable audio player

㉗ To Bluetooth INTERFACE (KCE-400BT) (sold separately)

㉔ CD Changer (Sold Separately)

㉕ Amplifier (Sold Separately) — Speakers: Rear left, Rear right

㉕ Amplifier (Sold Separately) — Front left, Front right

㉕ Amplifier (Sold Separately) — Subwoofers

*1 The system switch is located on the bottom of the unit.

44-EN

① **Antenna Receptacle**

② **Power Antenna Lead (Blue)**
Connect this lead to the +B terminal of your power antenna, if applicable.

* *This lead should be used only for controlling the vehicle's power antenna. Do not use this lead to turn on an amplifier, or a signal processor, etc.*

③ **Remote Turn-On Lead (Blue/White)**
Connect this lead to the remote turn-on lead of your amplifier or signal processor.

④ **Audio Interrupt In Lead (Pink/Black)**

⑤ **Illumination Lead (Orange)**
This lead may be connected to the vehicle's instrument cluster illumination lead. This will allow the backlighting of the iDA-X303 to dim whenever the vehicle's lights are turned on.

⑥ **Switched Power Lead (Ignition) (Red)**
Connect this lead to an open terminal on the vehicle's fuse box or another unused power source which provides (+)12V only when the ignition is turned on or in the accessory position.

⑦ **Battery Lead (Yellow)**
Connect this lead to the positive (+) post of the vehicle's battery.

⑧ **Ground Lead (Black)**
Connect this lead to a good chassis ground on the vehicle. Make sure the connection is made to bare metal and is securely fastened using the sheet metal screw provided.

⑨ **Power Supply Connector**

⑩ **Right Front (+) Speaker Output Lead (Gray)**

⑪ **Right Front (–) Speaker Output Lead (Gray/Black)**

⑫ **Right Rear (–) Speaker Output Lead (Violet/Black)**

⑬ **Right Rear (+) Speaker Output Lead (Violet)**

⑭ **Left Rear (+) Speaker Output Lead (Green)**

⑮ **Left Rear (–) Speaker Output Lead (Green/Black)**

⑯ **Left Front (–) Speaker Output Lead (White/Black)**

⑰ **Left Front (+) Speaker Output Lead (White)**

⑱ **Fuse Holder (10A)**

⑲ **Ai-NET Connector**
Connect this to the output or input connector of another device (CD Changer, Equalizer, HD Radio TUNER MODULE, etc.) equipped with Ai-NET.

* *Be sure to set "Setting the Connected Head Unit (MODEL SETUP)" to "CD CHG", when the DHA-S690 is connected.*
* *Interface adapter for iPod (KCA-420i) is not recommended for use with this product.*
* *You can input TV/video sound by connecting an optional Ai-NET/RCA Interface cable (KCA-121B) to this component.*

⑳ **Steering Remote Control Interface Connector**
To steering remote control interface box.

㉑ **Rear Output/Input RCA Connectors**
It can be used as Rear Output or Input RCA Connectors. RED is right and WHITE is left.

㉒ **Front Output/Input RCA Connectors**
It can be used as Front Output or Input RCA Connectors. RED is right and WHITE is left.

㉓ **Subwoofer Output RCA Connectors**
RED is right and WHITE is left.

㉔ **Ai-NET Cable (Included with CD Changer)**

㉕ **RCA Extension Cable (sold separately)**

㉖ **Bluetooth interface connector**
Connect this to an optional Bluetooth INTERFACE (KCE-400BT). To use a hands-free mobile phone, an optional Bluetooth INTERFACE (KCE-400BT) connection is required. For details on connection, refer to the Owner's Manual of the Bluetooth INTERFACE (KCE-400BT). You can also connect this to an external device (such as a portable player) by using Conversion cable (KCE-237B) for building up the AUX IN (sold separately).

* *Refer to "Setting the AUX+ Mode" (page 22).*

AUX+ ON : When the external device is connected.
AUX+ OFF : When set to OFF, AUX+ source cannot be selected.

㉗ **KCE-400BT Connection Cable (Included with KCE-400BT)**

㉘ **System Switch**
When connecting a processor or divider using Ai-NET, place this switch in the EXT AP position. When no device is connected, leave the switch in the NORM position.
When switched to NORM, the RCA Connectors ㉑ and ㉒ can be used as Output RCA Connectors.
When switched to EXT AP, the RCA Connectors ㉑ and ㉒ can be used as Input RCA Connectors.

* *Be sure to turn the power off to the unit before changing the switch position.*

㉙ **USB Connector**
Connect this to an USB memory or to an iPhone/iPod or to a portable audio player. To use an iPhone/iPod, Interface cable for iPod connection is required.

* *Use the supplied USB cable. If a USB cable other than the supplied is used, correct performance cannot be guaranteed.*
* *Route the USB cable away from other cables.*

To prevent external noise from entering the audio system.
• Locate the unit and route the leads at least 10 cm away from the car harness.
• Keep the battery power leads as far away from other leads as possible.
• Connect the ground lead securely to a bare metal spot (remove any paint, dirt or grease if necessary) of the car chassis.
• If you add an optional noise suppressor, connect it as far away from the unit as possible. Your Alpine dealer carries various noise suppressors, contact them for further information.
• Your Alpine dealer knows best about noise prevention measures so consult your dealer for further information.

//////ALPINE®

LIMITED WARRANTY

ALPINE ELECTRONICS OF AMERICA, INC. AND ALPINE OF CANADA INC. ("Alpine"), are dedicated to quality craftsmanship and are pleased to offer this Warranty. We suggest that you read it thoroughly. Should you have any questions, please contact your Dealer or contact Alpine at one of the telephone numbers listed below.

● **PRODUCTS COVERED:**
This Warranty covers Car Audio Products and Related Accessories ("the product"). Products purchased in the Canada are covered only in the Canada. Products purchased in the U.S.A. are covered only in the U.S.A.

● **LENGTH OF WARRANTY:**
This Warranty is in effect for one year from the date of the first consumer purchase.

● **WHO IS COVERED:**
This Warranty only covers the original purchaser of the product, who must reside in the United States, Puerto Rico or Canada.

● **WHAT IS COVERED:**
This Warranty covers defects in materials or workmanship (parts and labor) in the product.

● **WHAT IS NOT COVERED:**
This Warranty does not cover the following:
① Damage occurring during shipment of the product to Alpine for repair (claims must be presented to the carrier).
② Damage caused by accident or abuse, including burned voice coils caused by over-driving the speaker (amplifier level is turned up and driven into distortion or clipping). Speaker mechanical failure (e.g. punctures, tears or rips). Cracked or damaged LCD panels. Dropped or damaged hard drives.
③ Damage caused by negligence, misuse, improper operation or failure to follow instructions contained in the Owner's manual.
④ Damage caused by act of God, including without limitation, earthquake, fire, flood, storms or other acts of nature. Any cost or expense related to the removal or reinstallation of the product.
⑤ Service performed by an unauthorized person, company or association.
⑥ Any product which has the serial number defaced, altered or removed.
⑦ Any product which has been adjusted, altered or modified without Alpine's consent.
⑧ Any product not distributed by Alpine within the United States, Puerto Rico or Canada.
⑨ Any product not purchased from an Authorized Alpine Dealer.

● **HOW TO OBTAIN WARRANTY SERVICE:**
① You are responsible for delivery of the product to an Authorized Alpine Service Center or Alpine for repair and for payment of any initial shipping charges. Alpine will, at its option, repair or replace the product with a new or reconditioned product without charge. If the repairs are covered by the warranty, and if the product was shipped to an Authorized Alpine Service Center or Alpine, Alpine will pay the return shipping charges.
② You should provide a detailed description of the problem(s) for which service is required.

③ You must supply proof of your purchase of the product.
④ You must package the product securely to avoid damage during shipment. To prevent lost packages it is recommended to use a carrier that provides a tracking service.

● **HOW WE LIMIT IMPLIED WARRANTIES:**
ANY IMPLIED WARRANTIES INCLUDING FITNESS FOR USE AND MERCHANTABILITY ARE LIMITED IN DURATION TO THE PERIOD OF THE EXPRESS WARRANTY SET FORTH ABOVE AND NO PERSON IS AUTHORIZED TO ASSUME FOR ALPINE ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT.

● **HOW WE EXCLUDE CERTAIN DAMAGES:**
ALPINE EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES CAUSED BY THE PRODUCT. THE TERM "INCIDENTAL DAMAGES" REFERS TO EXPENSES OF TRANSPORTING THE PRODUCT TO THE ALPINE SERVICE CENTER, LOSS OF THE ORIGINAL PURCHASER'S TIME, LOSS OF THE USE OF THE PRODUCT, BUS FARES, CAR RENTALS OR OTHERS COSTS RELATING TO THE CARE AND CUSTODY OF THE PRODUCT. THE TERM "CONSEQUENTIAL DAMAGES" REFERS TO THE COST OF REPAIRING OR REPLACING OTHER PROPERTY WHICH IS DAMAGED WHEN THIS PRODUCT DOES NOT WORK PROPERLY. THE REMEDIES PROVIDED UNDER THIS WARRANTY ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS.

● **HOW STATE/PROVINCIAL LAW RELATES TO THE WARRANTY:**
This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state and province to province. In addition, some states/provinces do not allow limitations on how long an implied warranty lasts, and some do not allow the exclusion or limitation of incidental or consequential damages. Accordingly, limitations as to these matters contained herein may not apply to you.

● **IN CANADA ONLY:**
This Warranty is not valid unless your Alpine car audio product has been installed in your vehicle by an Authorized Installation Center, and this warranty stamped upon installation by the installation center.

● **HOW TO CONTACT CUSTOMER SERVICE:**
Should the product require service, please call the following number for your nearest Authorized Alpine Service Center.

CAR AUDIO	1-800-ALPINE-1 (1-800-257-4631)
NAVIGATION	1-888-NAV-HELP (1-888-628-4357)

Or visit our website at; http://www.alpine-usa.com

ALPINE ELECTRONICS OF AMERICA, INC., 19145 Gramercy Place, Torrance, California 90501, U.S.A.
ALPINE ELECTRONICS OF CANADA, INC., 777 Supertest Road, Toronto, Ontario M3J 2M9, Canada
Do not send products to these addresses.
Call the toll free telephone number or visit the website to locate a service center.